

# Manufacturers Record

Industry Construction



\$6.50 per Year.  
Single Copy, 20 Cents.

Baltimore, Md.  
OCTOBER 2, 1930

## Men for High Places



Men of the highest type should be and, we believe, are available for service to the nation. Appointments to Government major positions place a responsibility on those selected which tests the best qualities of leadership and demands men of the strongest caliber.

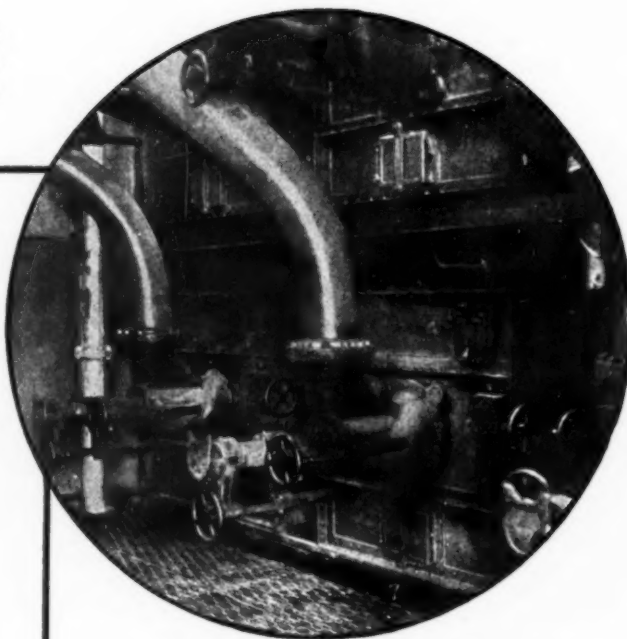
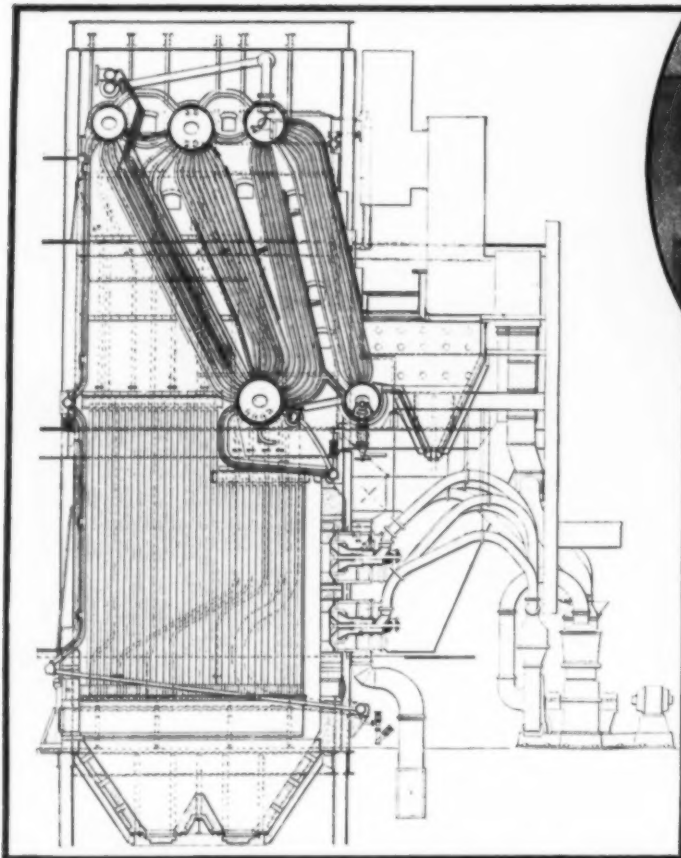
Of the three foremost commissions of the Federal Government—the Federal Reserve Board, the Tariff Commission and the Interstate Commerce Commission—the Tariff Commission and the Federal Reserve Board are in process of reorganization, with ultimate potential consequences of economic import to the whole world. Primarily, the United States is affected, but influences from such appointments as are made will radiate everywhere. Probably never before has the country had a greater supply of thoroughly qualified men on which to draw for active, constructive service in the government agencies mentioned. Probably never before have men of outstanding achievement and success in industry and finance been as willing to devote their talents to national affairs, with actual pecuniary loss to themselves.

It must be said that the main impediment to such appointments is that men of self-respect naturally hesitate to expose themselves to denunciations of demagogues, who seemingly attribute business or professional success to unethical, if not dishonest, practices.

Important appointments will be presented to the Senate for action when it meets. If appointees are wisely selected, if they are recognized as men of proven ability, the outcome will depend on public opinion which, if thoughtless and indifferent, will permit the demagogue to have his way, but which, if intelligent and patriotic, can render his efforts ineffectual.

We do not regard it as out of order to suggest that in scanning the country for the best men for these important posts the South be considered. Its remarkable industrial growth and the men of vision and attainments there, of whom there are more than a few who are admirably fitted to occupy places on these important commissions, should receive proper recognition.

Cross section through original 450 lb. steam generating unit showing the Heine boiler, C-E Fin Tube water-cooled furnace, C-E plate type Air Preheater, water-cooled arch, Raymond Mills and Lopulco Horizontal Burners for pulverized coal.



Lopulco Horizontal Burners placed one above the other introducing the pulverized fuel into the furnace.

**A**  
**duplicate of**  
**this unit was installed *one year later***

After a careful study of their steam requirements, the Champion Fibre Company, Canton, N. C., installed a 450 lb. steam generating unit, consisting of a Heine boiler, containing 18,280 sq. ft. of heating surface, a C-E Fin Tube water-cooled furnace, a C-E plate type Air Preheater and Lopulco Unit Type pulverized fuel system.

The success of this installation combined with a continued increase in load, suggested further modernizing of steam plant equipment. As a result, three older units were scrapped and a duplicate 450 lb. pressure unit ordered.

Today, the Champion Fibre Company's boiler plant is one of the most efficient steam generating installations in the South.

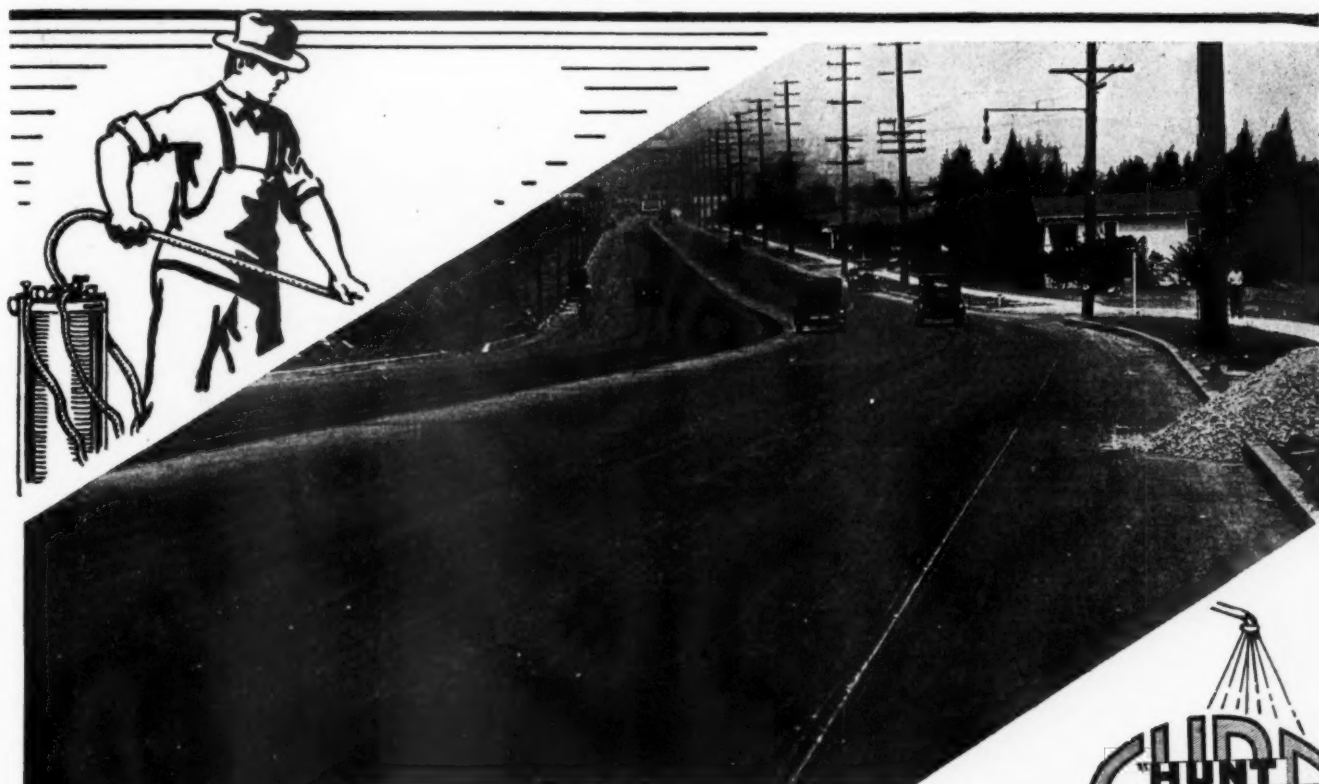
## COMBUSTION ENGINEERING CORPORATION

200 Madison Avenue

New York, N. Y.

AIR - PREHEATERS - BOILERS - STOKERS - PULVERIZED FUEL EQUIPMENT - WATER-COOLED FURNACES





## Curing Method *Produces* *Better Wearing Surface*



Years after the completion of "Hunt Process"-cured concrete pavements you can still see the float marks left by the finisher. Constant pounding of heavy traffic fails to wear away the surface; the film of "Hunt Process" cures uniformly without penetrating the surface.

When you compare results—strength, convenience, uniformity, low cost, quality—"Hunt Process" stands head and shoulders above other methods. An interesting booklet giving complete details is yours for the asking.

**McEVERLAST, Inc.**  
(INCORP.)

111 West Seventh Street, Los Angeles, California

35 E. Wacker Dr.  
CHICAGO, ILL.

1234 Athletic Club Bldg.  
DALLAS, TEXAS

1754 Graybar Bldg.  
NEW YORK, N. Y.

429 Russ Bldg.  
SAN FRANCISCO, CALIF.

OFFICES IN PRINCIPAL CITIES

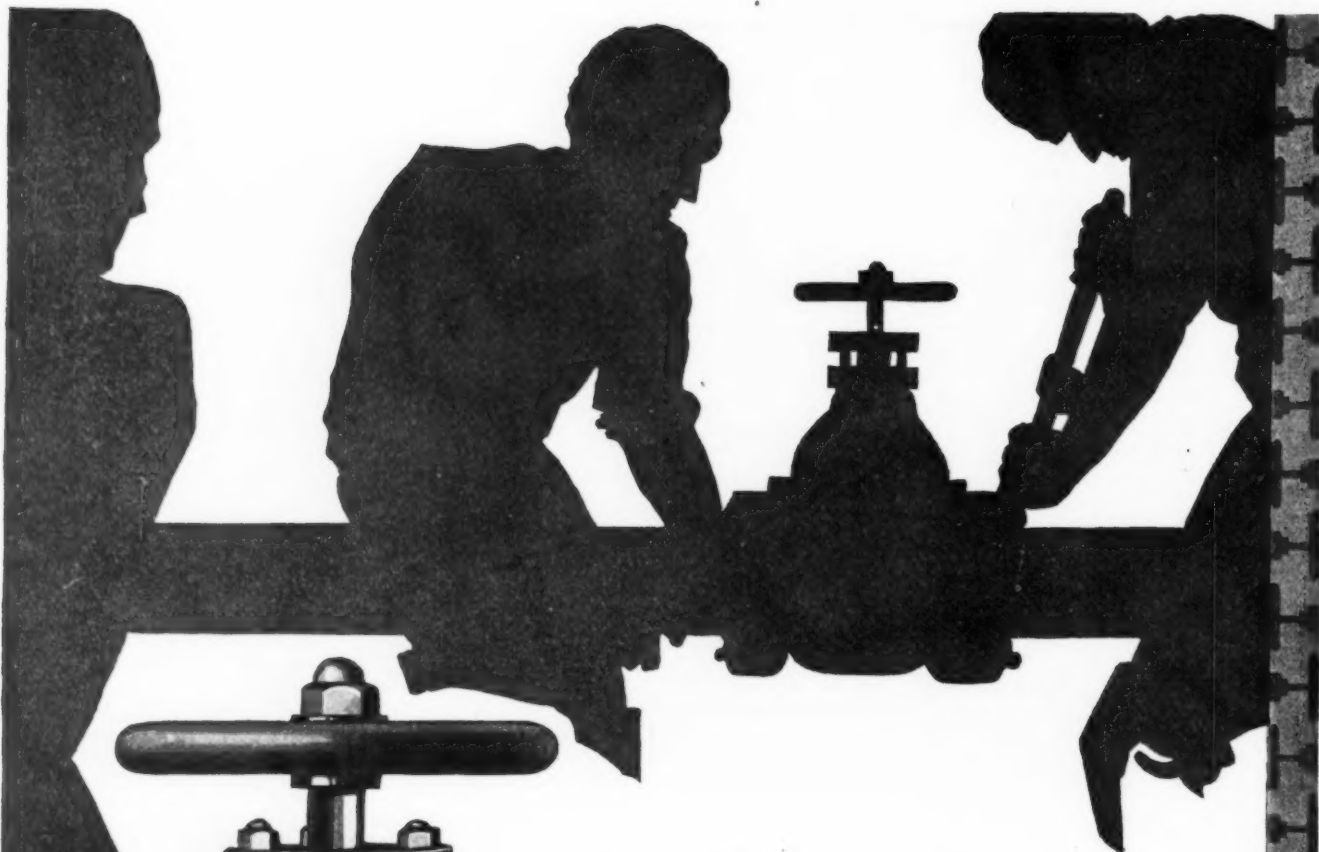
Please send me your illustrated booklet and details of this better method of curing.

Name

Address

City  State

Mfrs. Rec. 10-2-30



## When?

The inevitable future replacement job—how far off is it?

That's the one big consideration in choosing a valve. Thousands of Ludlows twenty years old, even thirty, forty—are still in service.

The

# LUDLOW

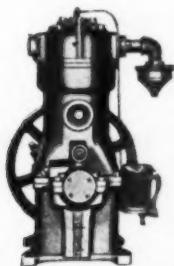
# VALVE

Manufacturing Co.

TRADE MARK

TROY N.Y.



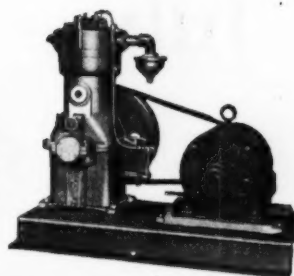


### Model W

Water cooled. Four sizes, from 4 x 3½ to 5½ x 5 Duplex. Displacements, from 15 cu. ft. to 128 cu. ft., depending upon size of compressor and horse power of motor. Maximum pressure, 150 lbs. Illustration shows automatic unloader for maintaining uniform pressure under continuous operating conditions.

### Model WD

Single stage, water cooled, quiet, with multiple V-Belt drive. May be had with automatic pressure control or automatic unloader for either intermittent or continuous operation. Displacements from 15 cu. ft. to 128 cu. ft.



# Compressed Air Flexible—Economical

Manufacturers are rapidly discovering that compressed air is more suitable for many operations, than any other power.

Its flexibility and the ease with which pneumatic tools may be handled, are remarkable. It's versatile, too, doing almost anything, from operating a pneumatic lift to blowing dust or lint from machinery.

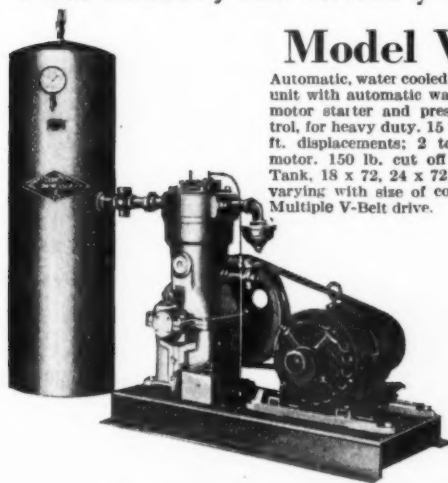
While flexibility and versatility are in-

herent properties of compressed air, you must look to Quincy Compressors for the utmost in economy, for the entire Quincy Line is designed and built with economy as the goal—economy in power requirements, in maintenance, in replacements.

Quincy Compressors are backed by a warrant of complete satisfaction without a time limit.

14 sizes—water cooled and air cooled.

Write for complete information, or use the coupon below.



### Model WC

Automatic, water cooled, complete unit with automatic water valve, motor starter and pressure control, for heavy duty. 15 to 128 cu. ft. displacements; 2 to 25 h.p. motor. 150 lb. cut off pressure. Tank, 18 x 72, 24 x 72, 30 x 72, varying with size of compressor. Multiple V-Belt drive.

Quincy Compressor Co.,  
216 Maine Street, Quincy, Ill.  
Please send complete story of Quincy Compressors as applied to my individual business.

Now use compressed air for.....

Could use compressed air for.....

Firm Name.....

Line of Business.....

Address.....

City..... State.....

#### SERVICE AND SALES

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Also in other important centers

**QUINCY**  
**Compressors**  
216 MAINE ST.  
Quincy, Illinois  
N1078R1

# In July — **Raymond Equipment** *was selected for 13 distinctly different purposes*

The ability of Raymond equipment to meet diversified grinding problems is illustrated by a check of the uses for which Raymond Mills were specified during the month of July:

•

- For handling SOAP
- For regrinding ENGLISH CHALK WHITING
- For grinding HYDRATED LIME
- For firing a boiler direct with PITCH
- For handling various CARBON PRODUCTS
- For grinding COAL to fire a rotary kiln
- For grinding DOLOMITIC LIMESTONE
- For grinding FIRE CLAY
- For grinding Tennessee PHOSPHATE ROCK
- For grinding SALT
- For grinding various CHEMICAL MATERIALS
- For separating COCOA
- For grinding COAL to fire boilers

•

Raymond equipment has been installed for reducing over 200 materials to a powdered form. Forty-three years of experience in the manufacture of grinding, pulverizing and air separating machinery has given our engineering department a background which assures a satisfactory installation.

If you have a grinding, pulverizing or classifying problem let a Raymond engineer offer you his suggestions for improving your products.



## **RAYMOND BROS. IMPACT PULVERIZER CO.**

*Subsidiary of International Combustion Engineering Corporation*

Main Office and Works: 1323 North Branch Street, Chicago, Illinois  
342 Madison Ave., New York

Subway Terminal Bldg., Los Angeles



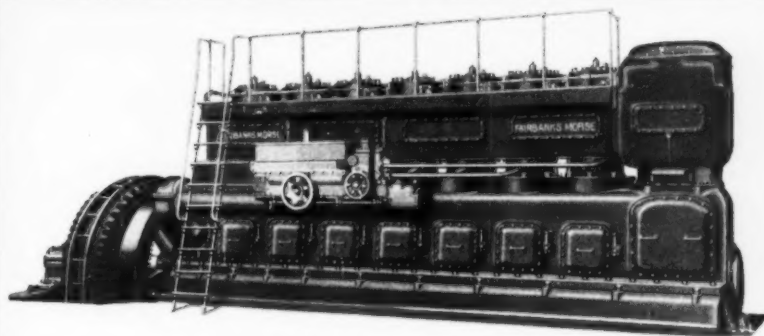
# An achievement in Research produces new Diesel values!

**S**INCE the early days of its pioneering, time has brought many changes and new knowledge to the science of Diesel design and construction. The part played by Fairbanks-Morse in this development of the Diesel has been proportionate to its leadership. Through the years, millions spent in research have enabled this organization to make those contributions which have established Fairbanks-Morse as America's largest manufacturers of Diesel Engines.

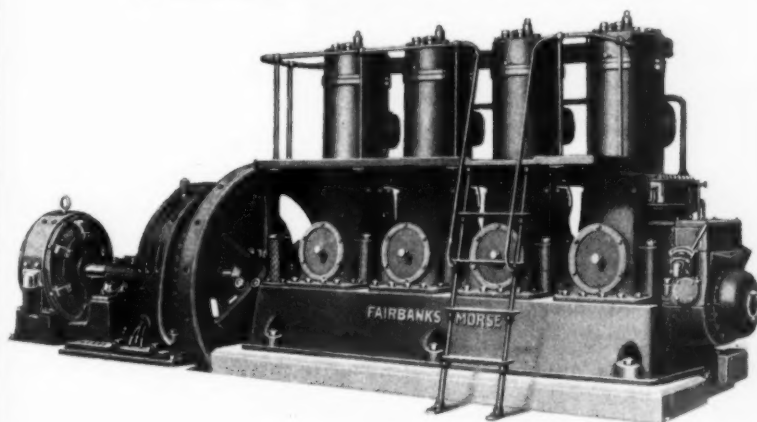
In step with advanced practice in Diesel design, Fairbanks-Morse early recognized the two-cycle, airless-injection type of engine as offering the utmost in simplicity, dependability and over-all operating economy. Today this simpler type engine has attained world-wide recognition of its superiority. Fairbanks-Morse is responsible for its present leadership in America.

Now, Fairbanks-Morse again offers new improvements which are of major importance to those who are interested in Diesel power. An achievement in research has resulted in remarkable improvement in the fuel efficiency of all F-M Diesels.

The result is that the fuel economy of the F-M two-cycle airless-injection engine is unequalled by any other engine of this



*7 cylinder, Model 33 16 x 20 Stationary Diesel Engine.*



*4 cylinder engine with generator and exciter.*

type. The larger sizes up to 1400 hp. offer such improved efficiencies that the fuel economy of these engines is now unsurpassed by any engine of even more complicated type.

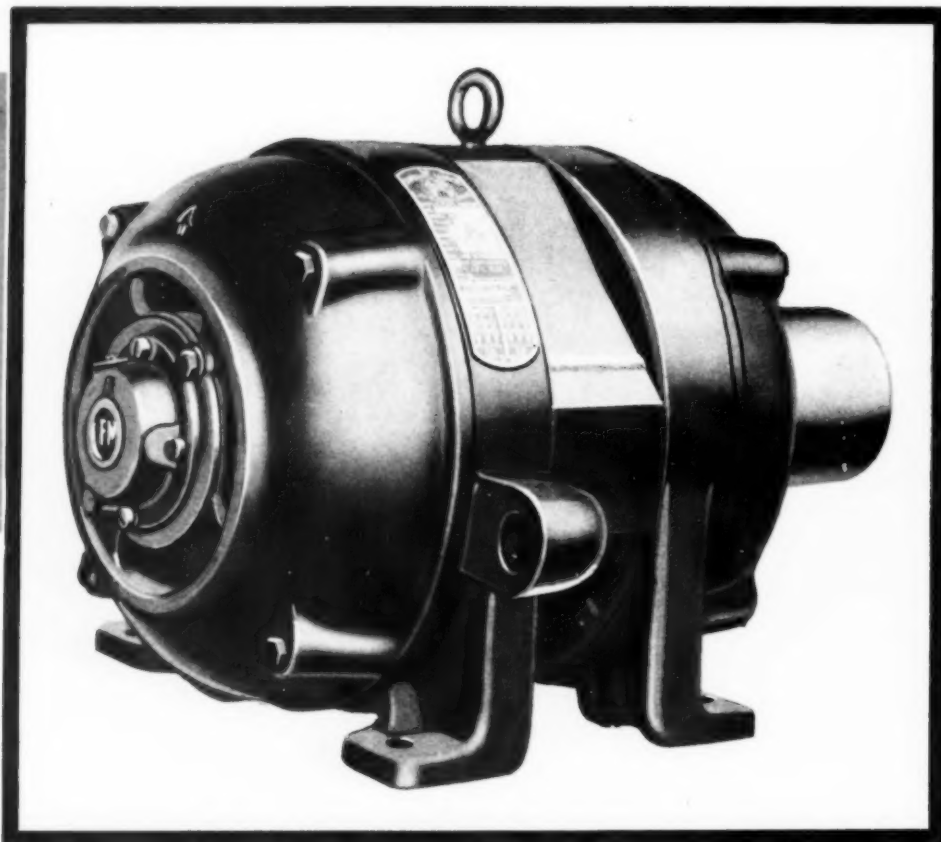
FAIRBANKS, MORSE & CO.  
900 S. Wabash Ave., Chicago

*32 branches at your service throughout the  
United States*

## FAIRBANKS-MORSE DIESEL ENGINES

POWER, PUMPING AND WEIGHING EQUIPMENT





*Note the weight of frame, broad heavy feet and compact construction.*

## Do you think there isn't much difference in motors

If you have thought that all motors are practically alike—you are just the individual who should see an F-M Motor. For all motors, type for type, are quite similar in *electrical* characteristics, *but what a difference in mechanical construction!* So take an F-M Motor apart—no evidence of construction and materials designed to meet a price. In every detail, frame, field, bearings, rotor, you will find ample evidence of the plus value put into this product.

Your trained appreciation of what constitutes best motor construction practice will lead you inevitably to join the growing preference for Fairbanks-Morse Motors.

Whether your plant uses one motor or five thousand, motors are too important to order from a catalog. Will you write today arranging with F-M engineers for an actual inspection of a Fairbanks-Morse Motor *at your plant?*

FAIRBANKS, MORSE & CO., Chicago  
32 branches at your service throughout the United States

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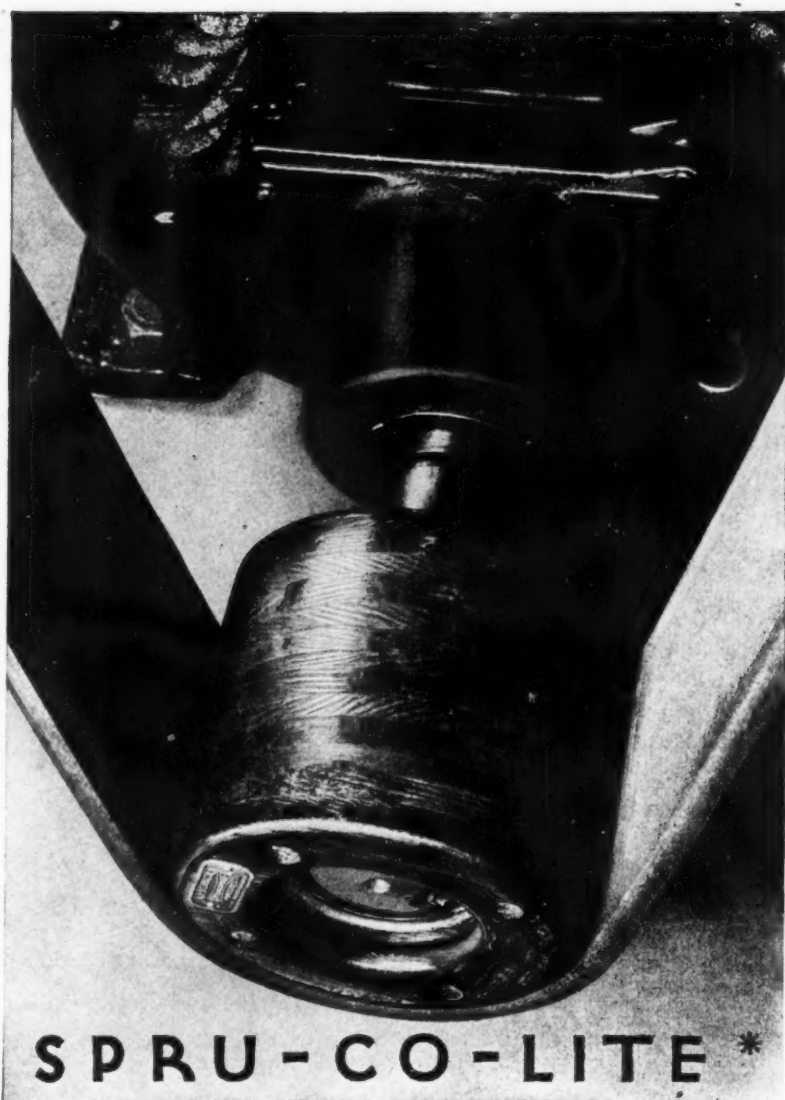
# FAIRBANKS-MORSE MOTORS

POWER, PUMPING AND WEIGHING EQUIPMENT



# New Grip for Slipping Motor Belts

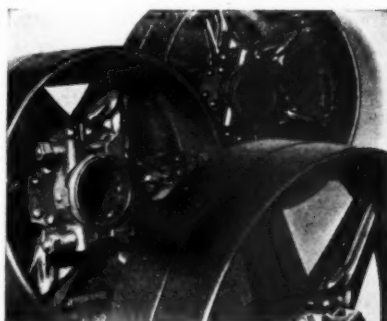
*... If you bought and paid for a 10 h.p. motor would you be satisfied with the delivery of one rated at 6 or 8? Yet that is what happens if the potential of your motor fails to reach your machine because of slipping belts.*



**T**HE price of the best motor pulley is but a mere fraction of the cost of the equipment it will serve, or of the power it will transmit. Yet the selection of the best motor pulley should be a consideration of major importance, for this vital link between motor and machine measures the effective horse-power of your motors—the capacity of your machines—the production cost of your products—the profits to your business.

AMERICAN Sprucolite\* Pulleys possess the highest coefficient of friction of any commercially built pulleys. They are made of Sprucolite, a special, patented, synthetic material manufactured from clear Sitka Spruce reduced with a casein binder under hydraulic pressure of 3000 tons to a homogeneous mass of uniform density. The ideal pulley material thus obtained is resilient, light in weight, possesses great strength, durability.

AMERICAN Sprucolite Pulleys are optional equipment on all leading makes of motors. They are available through a large number of dealers from coast to coast.



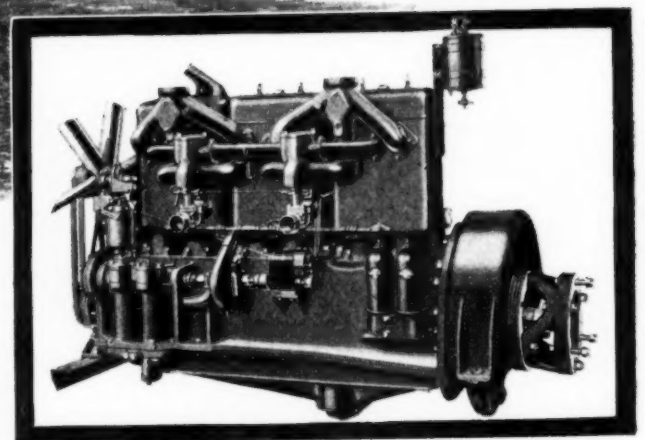
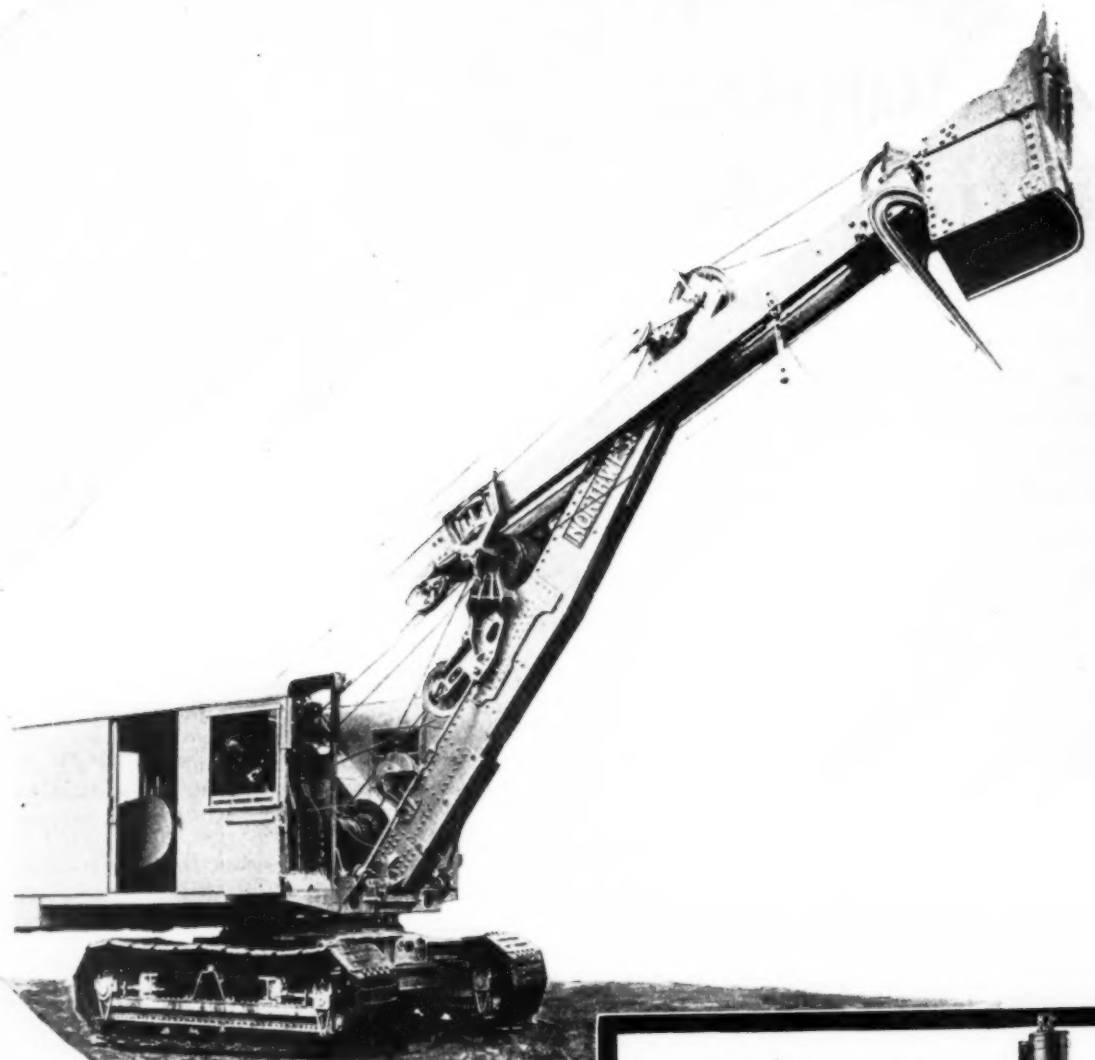
Over 7 million AMERICAN Pressed Steel Shafting Pulleys and Hangers have been put to work in leading plants throughout the country. Light, strong, durable power transmission units, they are regarded as the standard of quality wherever shafting pulleys and hangers are used.

**THE AMERICAN PULLEY COMPANY**  
4200 Wissahickon Avenue, Philadelphia, Pa.

*Pressed Steel: Shafting Pulleys, Hangers, Hand Trucks, Miscellaneous Stampings. Sprucolite Motor Pulleys, Machine Pulleys.*

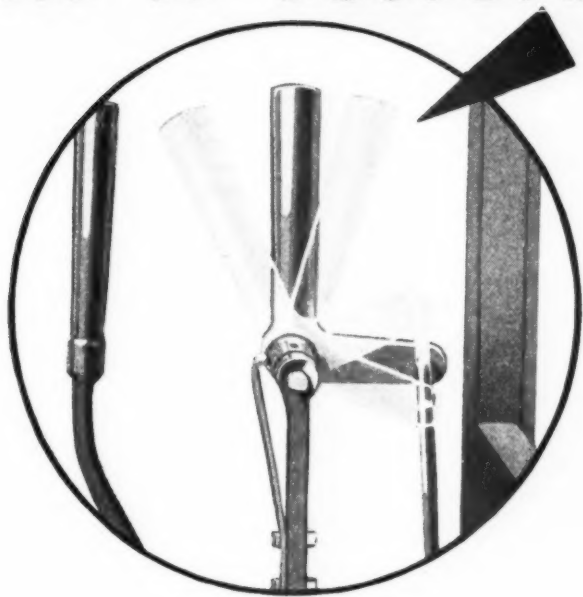
**AMERICAN  
SPRUCOLITE  
PULLEYS**

# NOT ONE SPEED NOT TWO SPEEDS





# BUT *any* speed at a touch of a lever



**W**HAT are the two speeds usually offered compared to the range of speeds of any degree from the lowest to the highest offered by the Northwest Variable Speed Motor, Accelerator Controlled?

The Northwest Variable Speed Motor, Accelerator Controlled, eliminates the complicated gear trains and transmissions that the usual two-speed operation requires. With a touch of the accelerator your operator varies the speed of every operation at will, reducing the time lost in hoisting, swinging and traveling, adding 20% to the day's output.

Profit is the best economy and dirt moved means profit. Ask about this greatest development in shovel and crane power plants.

## NORTHWEST ENGINEERING CO.

*The world's largest exclusive builders of gasoline, oil burning and electric powered shovels, cranes and draglines*

1733 Steger Building      ::      28 East Jackson Boulevard  
Chicago, Illinois, U. S. A.



### *Branch Offices:*

351 Whitehall St., Atlanta, Ga.	1325 Macklind Ave., St. Louis, Mo.
393 N. Main St., Memphis, Tenn.	1100 Milby St., Houston, Texas
1221 S. Lamar St., Dallas, Texas	816 Howard Ave., New Orleans, La.

# AMERICAN

## STEEL SHEETS for EVERY PURPOSE



### BLUE ANNEALED—BLACK GALVANIZED AND SPECIAL SHEETS

*Specify* AMERICAN Products—correctly manufactured in every detail, mechanically and metallurgically. This Company is the leading manufacturer of high grade Black and Galvanized Sheets, and Tin and Terne Plates for all known uses; also genuine KEYSTONE Rust-resisting Copper Steel Products. Sold by leading metal merchants.



## American Sheet and Tin Plate Company

GENERAL OFFICES: Frick Building, PITTSBURGH, PA

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

QUALITY  
PRODUCTS  
—  
Dependable  
Service

AMERICAN BRIDGE COMPANY  
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FEDERAL SHIPBUILDING & DRY DOCK CO.  
ILLINOIS STEEL COMPANY  
NATIONAL TUBE COMPANY

THE LORAIN STEEL COMPANY  
TENNESSEE COAL, IRON & RAILROAD CO.  
UNIVERSAL ATLAS CEMENT COMPANY

Export Distributors—United States Steel Products Corporation, New York, N.Y.

# TENNESSEE

KEYSTONE COPPER STEEL

## SHEETS

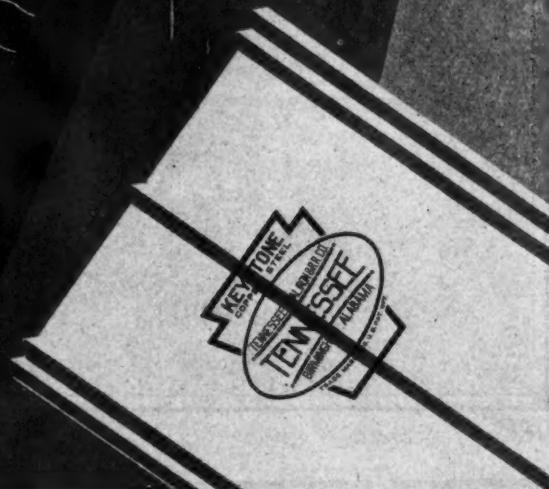
Black-Galvanized-Formed



Produced on modern mills and manufactured with an emphasis on quality, Tennessee Galvanized Sheets have built up an enviable reputation. Can be furnished in the following corrugations and crimps.

- 1 1/4" CORRUGATED
- 2" CORRUGATED
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- 2 V-CRIMPED
- 3 V-CRIMPED
- 4 V-CRIMPED
- 5 V-CRIMPED

WE ARE ALSO MANUFACTURERS OF TENNESSEE OPEN HEARTH  
BLUE ANNEALED, BLACK AND SPECIAL FINISH SHEETS



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SUBSIDIARY OF UNITED STATES STEEL CORPORATION

AMERICAN BRIDGE COMPANY  
AMERICAN SHEET AND TIN PLATE COMPANY  
AMERICAN STEEL AND WIRE COMPANY

Pacific Coast Distributors—Columbia Steel Company, Russ Bldg., San Francisco, Calif.

CARNEGIE STEEL COMPANY  
COLUMBIA STEEL COMPANY  
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FEDERAL SHIPB'LDG. & DRY DOCK CO.  
ILLINOIS STEEL COMPANY  
NATIONAL TUBE COMPANY

Export Distributors—United States Steel Products Company, 30 Church St., New York, N.Y.

THE LORAIN STEEL COMPANY  
TENNESSEE COAL, IRON & RAILROAD CO.  
UNIVERSAL ATLAS CEMENT COMPANY



# REINFORCING for PERMANENCY

with

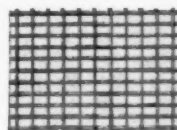
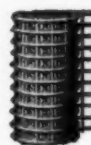
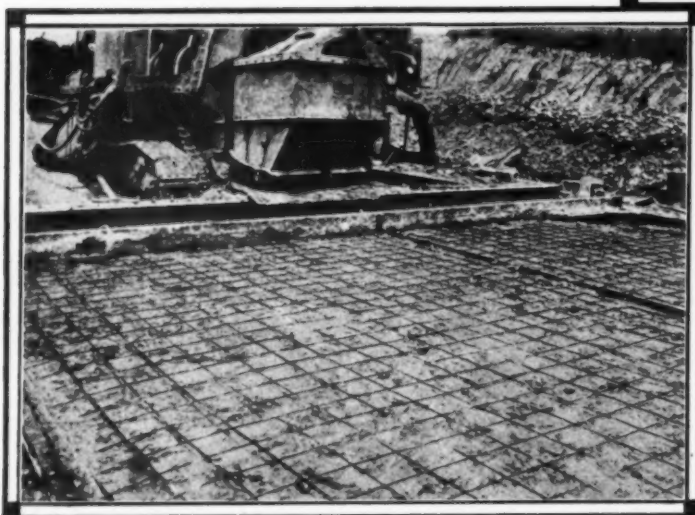
## AMERICAN STEEL & WIRE COMPANY

# WIRE FABRIC

### Keep the Highways Open

Present day traffic conditions—the great increase in bus transportation and the long hauls being made by heavy, destructive trucks—make it more essential than ever that pavements be constructed in the strongest manner possible. Strength, of course, means reinforcement—and this can best be assured through the use of wire fabric.

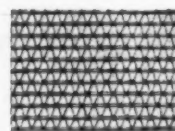
Data proves that pavements, properly reinforced with American Steel & Wire Company wire fabric, made of cold drawn steel, have a lasting good surface—are always open to traffic—and that maintenance costs are greatly reduced.



**Electric  
Weld**

**Furnished in Rolls or Sheets**

**Triangle  
Mesh**



Today—Write for your copy of "Reinforcing Roads and Streets" and "1929 Proceedings of American Road Builders Association."

## AMERICAN STEEL & WIRE COMPANY

208 S. La Salle Street, Chicago

Other Sales Offices: Atlanta Baltimore Birmingham  
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## • • Planting a Skyscraper • •

For all types of foundation work, particularly where adjoining foundations and streets must be protected, Carnegie Steel Sheet Piling is a most efficient device. A group of practical, well designed sections, both straight and arch web, covers every possible condition requiring the use of sheet piling. An interlock of especially rugged construction, easy driving with no tendency to wedge or creep out of plumb, and exceptional watertightness characterize Carnegie Piling sections. Another

feature of value in foundation work, or where it may be desirable to keep width of wall to a minimum, is that Carnegie Piling may be driven with arches turned in the same direction.

Many years in the promotion of steel sheet piling have enabled us to collect a vast amount of data as to the successful accomplishment of engineering work involving its use. Our engineering department is always at the service of contractors and engineers having such work in hand . . . . .

# CARNEGIE

## STEEL SHEET PILING

CARNEGIE STEEL COMPANY • PITTSBURGH • PA.



Subsidiary of UNITED STATES STEEL CORPORATION

# A LONG-TIME INVESTMENT

## *Copper-Steel* *pipe*



**BUSINESS DISTRICTS**



**FACTORY SECTIONS**



**RESIDENTIAL AREAS**

IN soil, waste, vent lines and rain leaders and wherever pipe is exposed to atmospheric corrosion—NATIONAL Copper-Steel Pipe should be used to secure greater protection. Evidence, accumulated over a period of nearly twenty years, clearly proves that copper-steel adds years of extra life wherever piping is exposed to alternate wet and dry conditions; it is a simple and economical protection requiring no extra work or attention after installation.

NATIONAL Copper-Steel Pipe is the same high-grade steel pipe consumers have been using for years—the same ductility, strength, uniformity and good threading qualities. Just a small percentage of pure copper is added which thoroughly alloys with the highly refined steel, making it more resistant to this type of corrosion. Ask for Bulletin No. 11, describing—

**NATIONAL COPPER-STEEL PIPE**  
*The Original Copper-Steel Pipe*

**NATIONAL TUBE COMPANY • Pittsburgh, Pa.**  
Subsidiary of United States Steel Corporation

# NATIONAL



## DALLAS insures its water system's future by installing LARGE CAST IRON MAINS



Photo by Fairchild Aerial Surveys, Inc.

**A**NOTHER fast-growing city that is building for a still greater future is Dallas, Texas. To insure that its water supply line will be of adequate capacity to take care of estimated requirements generations hence, this city is laying 19 miles of large size cast iron mains.

Most city engineers are convinced of the sound economy of specifying large diameter cast iron pipe for water and gas mains. These men know that over a period of years, it is far less costly to lay a large diameter cast iron main than to put down small mains that become inadequate in capacity through growth of population and have to be replaced in a few decades. Due to the growing acceptance of this principle, and to the known long life of cast iron pipe, more large diameter cast iron pipe was produced last year than ever before.

The reason for the durability of cast iron pipe is its effective resistance to rust and corrosion. Water

and gas mains of ferrous metal (iron and steel) with the exception of cast iron, disintegrate from rust. Cast iron pipe is the only ferrous metal pipe practicable for underground mains which rust will not destroy.

For complete information regarding the economy of specifying cast iron pipe for water, gas, sewers, culverts or industrial needs, write to Thomas F. Wolfe, Research Engineer, 309 Peoples Gas Building, Chicago, Ill.

✧ ✧ ✧

Cast iron pipe bearing the "Q-Check" trade mark is obtainable from the following leading pipe foundries: Alabama Pipe Company, Anniston, Ala.; American Cast Iron Pipe Company, Birmingham, Ala.; James B. Clow & Sons, 219 N. Talman Avenue, Chicago, Ill.; Donaldson Iron Company, Emaus, Pa.; Glamorgan Pipe and Foundry Company, Lynchburg, Va.; Lynchburg Foundry Company, Lynchburg, Va.; National Cast Iron Pipe Company, Birmingham, Ala.; United States Pipe and Foundry Company, Burlington, N. J.; Warren Foundry and Pipe Company, 11 Broadway, New York.



Placing large diameter cast iron pipe for the Dallas water system in trench, twenty-one feet deep, cut through solid rock.



The "Q-check" symbol shown above has been adopted as the trade mark of The Cast Iron Pipe Research Association.

# CAST IRON PIPE

## 1,000,000 Feet of QUINN Concrete Pipe for Irrigation



Surge Well and Cap Stand in Texas.

Besides being specified as the standard of quality for pipe used in sewerage systems, drainage projects and culverts, Quinn Concrete Pipe has proved best for irrigation.

To irrigate 78,000 acres in San Juan, Texas, over 1,000,000 feet of Quinn Concrete Pipe from 16 in. to 72 in. in diameter have been used.

Just one of the many cases where Quinn Concrete Pipe Machines have lowered costs, increased quality, speeded up production. Write for the Quinn Book on concrete pipe profits, sent free.

**QUINN WIRE & IRON WORKS**  
1605 12th Street BOONE, IOWA

TAYLOR'S SPIRAL RIVETED PIPE

## TAYLOR SPIRAL RIVETED PIPE

Light weight pressure piping. Made of copper alloy steel. Equipped with unbreakable forged steel flanges. Furnished heavily galvanized or asphalt coated. Suitable for water, air, or exhaust steam conveying purposes. Sizes 3" to 42" diameter.

Send for Catalog

**Taylor Forge & Pipe Works, Chicago**

Box 485, Chicago, Ill.

50 Church St., New York, N. Y.

## From One Source

You can secure your entire steel requirements from Bethlehem — with the assurance that each item is as good and dependable as the facilities of a completely equipped organization with years of experience can make it.

**BETHLEHEM STEEL COMPANY**

General Offices: Bethlehem, Pa.

District Offices: New York, Boston, Philadelphia, Baltimore, Washington, Atlanta, Pittsburgh, Buffalo, Cleveland, Cincinnati, Detroit, Chicago, St. Louis.

Pacific Coast Distributor: Pacific Coast Steel Corporation, San Francisco, Los Angeles, Portland, Seattle, Honolulu.

# BETHLEHEM

## LEE CLAY PRODUCTS COMPANY

Manufacturers of

SEWER PIPE - CULVERT PIPE - WALL COPING

METER BOXES - FLUE LINING  
FIRE BRICK - FIRE CLAY



Grier - Lowrance Construction Company, prominent Mill Constructors of Stateville, North Carolina, writes through their Superintendent, W. W. Able: "It gives us pleasure to say of your Pipe, that it is among the best that we have ever used on any job. We used Lee Clay Products throughout on the Chesnee Mill Extension and are glad to say that we found a minimum of breakage, and a maximum of Quality and Service."

**LEE CLAY SHIPS GOOD PIPE**

Refractory Fire Clay produces a close vitreous body that is peculiarly adapted for conducting industrial wastes. Send us a list of your requirements, so that we may quote you delivered prices.

Office and Plant:

**CLEARFIELD, Rowan County KENTUCKY**

## UNIVERSAL CAST IRON PIPE

THE CENTRAL FOUNDRY COMPANY

Graybar Bldg., 43rd St. and Lexington Ave., New York, N. Y.  
Chicago Birmingham Dallas San Francisco

no packing no calking no bell holes

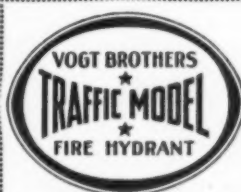
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**The Traffic Smash-up**  
Solution in Fire Hydrants  
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One-Fifth  
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Pipe

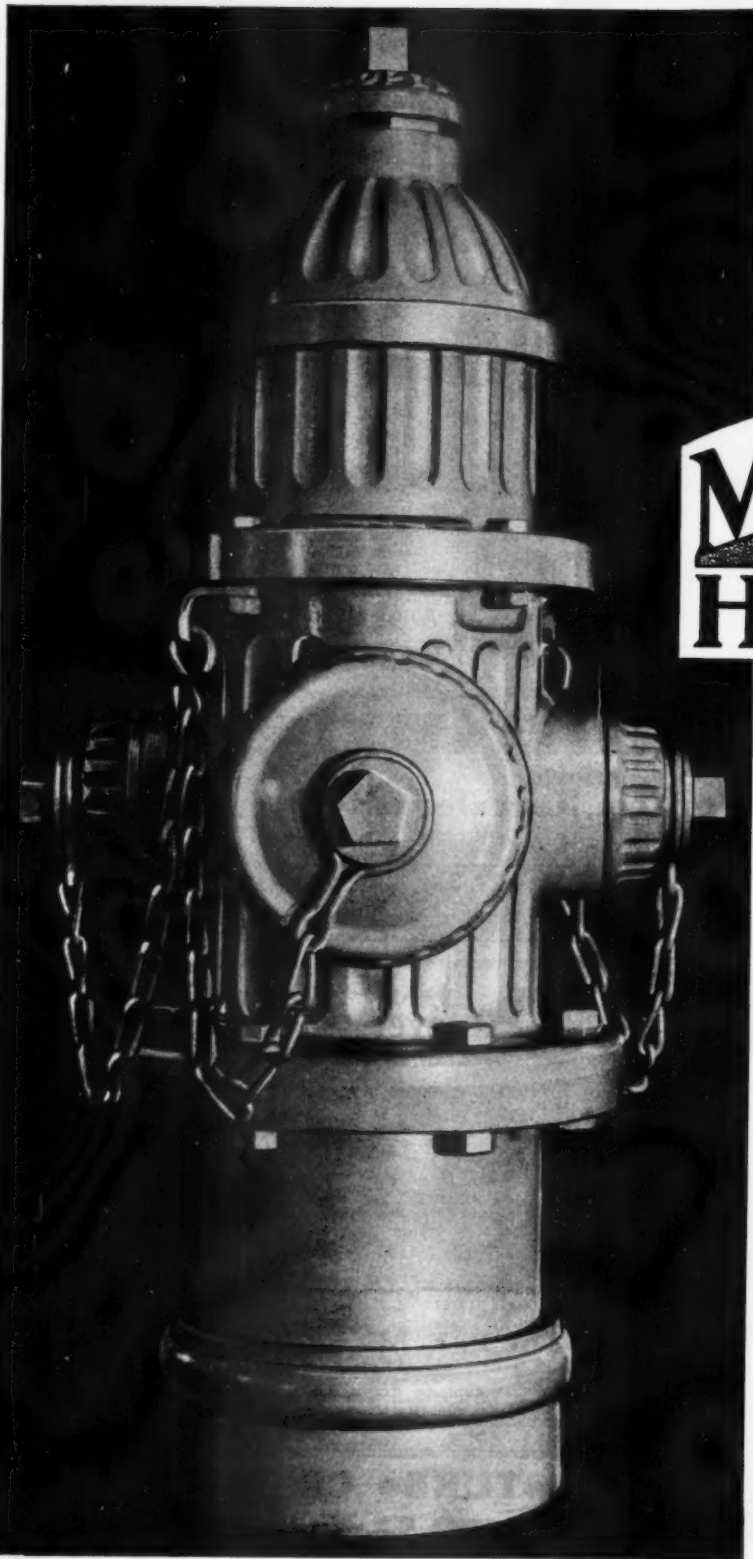
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**AN ABSOLUTELY TIGHT DURABLE PIPE**  
The lap riveted seam repeats its cycle every twelve inches, forming a broad-stiffening rib of great value, and makes Root pipe one-third stronger than any other type of pipe construction. Light weight and simple connections reduce transportation handling and erection costs. Suitable for conveying water, air, gas, exhaust steam and powdered coal.

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Pipe Specialists Continuously Since 1867. Sales Office: Woolworth Bldg., N. Y.





**Such cases as  
this have made  
staunch, loyal  
friends for . . .**

# MATHEWS MODERNIZED HYDRANT

Registered U. S. Patent Office

*Read this letter from the  
Borough of Souderton, Penna.*

R. D. WOOD & CO. June 9th, 1930  
400 Chestnut Street, Philadelphia, Pa.

GENTLEMEN:

Members of Souderton Borough Council wish to acknowledge with thanks and appreciation the service you rendered in replacing a broken Mathews Fire Hydrant on Washington Avenue, Thursday, April 17th, 1930.

This Hydrant was set in a new cement sidewalk on one of our finest concrete streets, and was struck by an automobile.

We thought we would have to break up the new sidewalk and concrete roadway to dig up the broken Hydrant. You can readily understand our great relief when we learned that by the use of your new Mathews Extraction Tool the broken barrel could be replaced without excavating.

We were agreeably surprised at the efficiency of this Extraction Tool. It enabled us to replace the broken barrel in less than an hour. This time included the repairing of the protection case, which was also broken at the upper end.

When the job was finished there was no indication that the Hydrant had been broken, because the sidewalk and the concrete street had not been disturbed or damaged.

In addition to preserving the appearance of the new sidewalk and street, we saved a considerable sum of money.

We cannot express too strongly our entire satisfaction with Mathews Hydrants and the new Extraction Tool which made all this possible.

Yours truly,

ROLLAND G. ALBRIGHT, Clerk

RGA:HVG

Patents Pending

## POINTS OF SUPERIORITY

Cannot leak when broken by traffic accidents.  
Cannot freeze because no water can work up along operating thread, or down around operating nut; and the barrel drains dry automatically after use.

Broken Mathews Hydrants are easily replaced without digging or breaking pavement.  
Water hammer is prevented.  
Stems cannot be bent in operation.

Easy, quick replacement of worn valve leathers.  
Completely revolving head, easily removable.  
Mathews Modernized Hydrants are interchangeable with old installations.

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VALVE BOXES  
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CAST IRON PIPE  
SAND SPUN  
(centrifugally cast)  
and PIT CAST  
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THE capitalized value of the benefits conferred by the power limiting characteristic as found in *De Laval Centrifugal Pumps* may far exceed the first cost of the pump. They include:

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2. High power factor where induction motor is used, since motor is of the right size for the load.



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The low starting torque of the De Laval pump also reduces current inrush with squirrel cage motors and permits the use of synchronous motors for correcting power factor.



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Manufacturers of Steam Turbines, Centrifugal Pumps, Centrifugal Blowers and Compressors, Double Helical Speed Reducing Gears, Worm Reduction Gears, Hydraulic Turbines, Flexible Couplings and Special Centrifugal Machinery

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Smith-Vaile **PLATT** Pumps

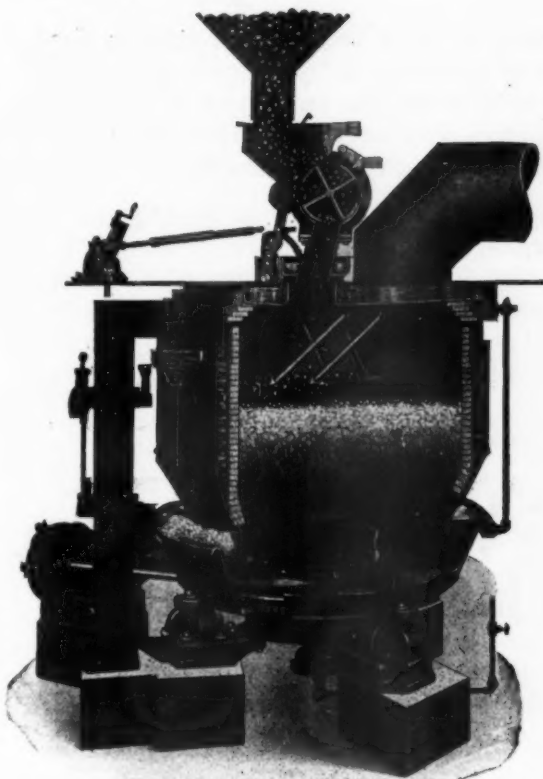
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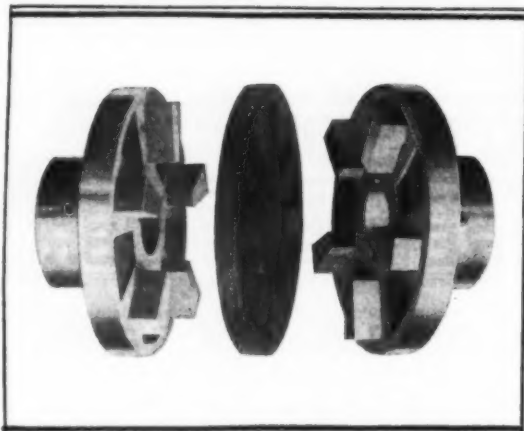
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Shafting	Speed Reducers
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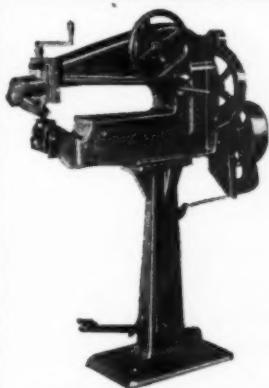
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A safe Belt because  
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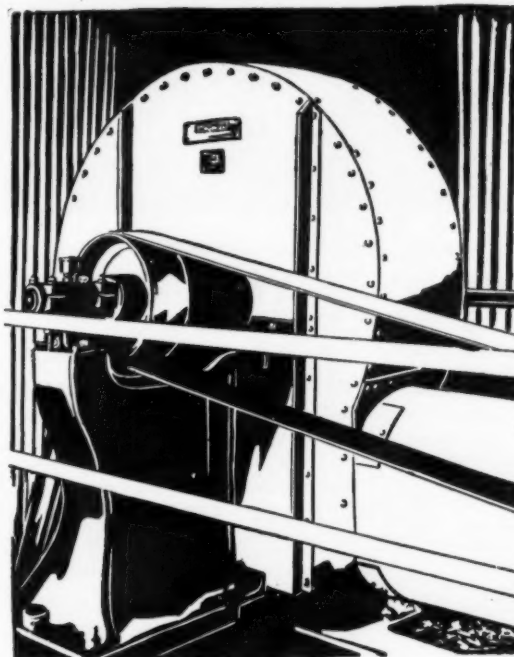
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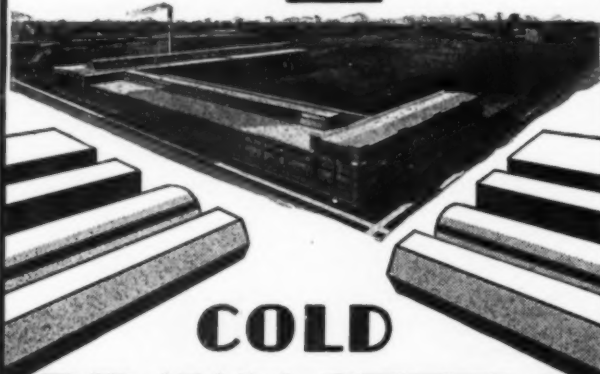
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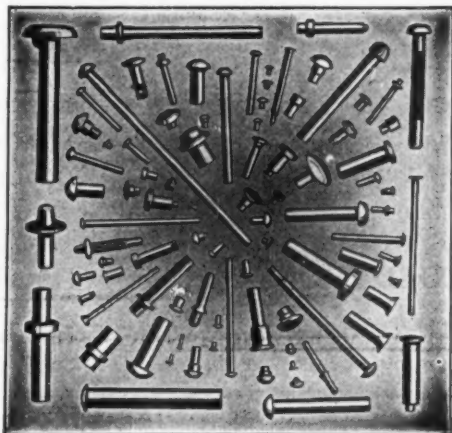
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Interchangeable Bolts and Nuts (Promco Brand) Special Screws and quality Rivets to order.

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*Every leaf of our record is not clear of mistakes . . .*

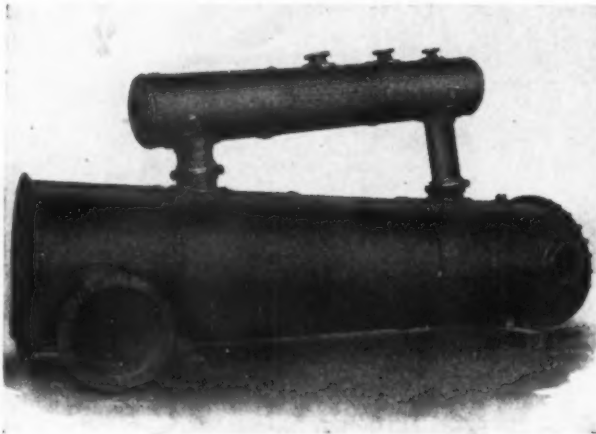
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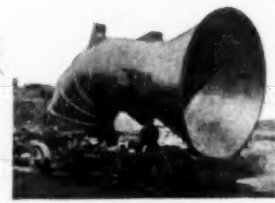
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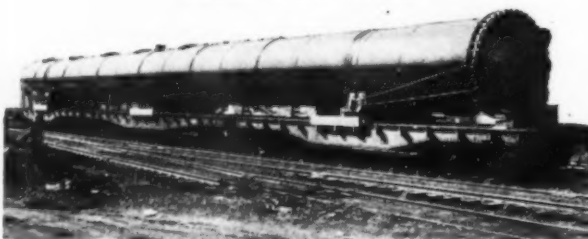
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It is the knowing how to design and construct a tank that will give good, long, honest, dependable service year in and year out without a hitch.

Caldwell Steel Tanks are the result. Engineers designed them according to approved engineering principles. A company with over thirty years of tank-building experience produces them.

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These are but a few of Caldwell characteristics which contribute to the significance of our slogan—"The Tank With a Reputation."

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TANKS  
AND  
TOWERS

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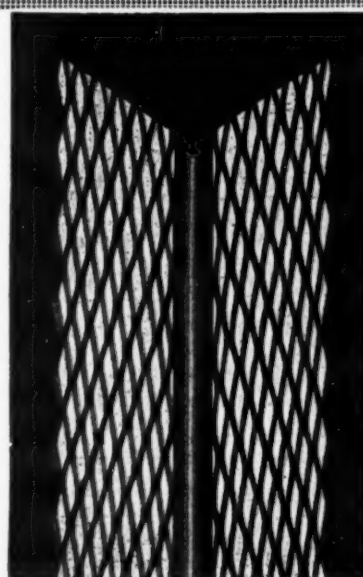
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Is the  
Easiest  
to Install**

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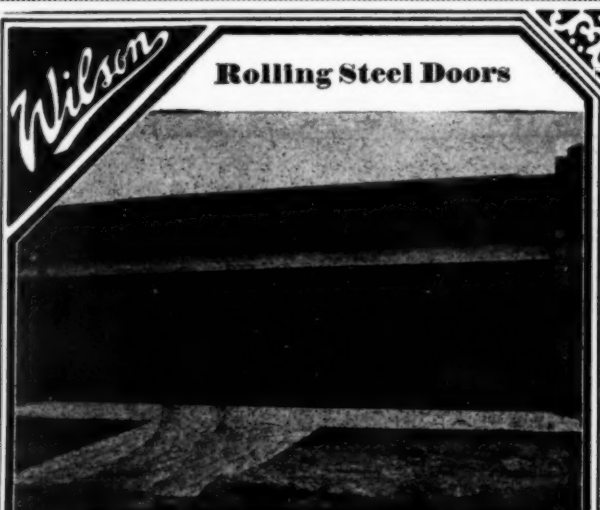
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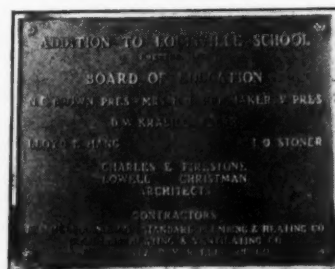
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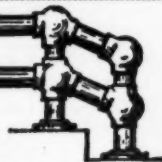
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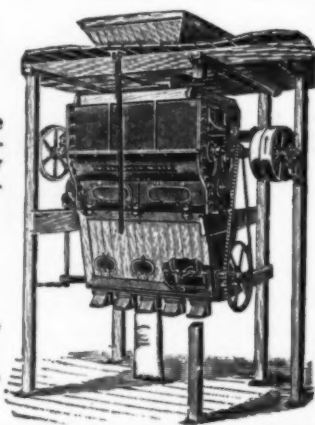
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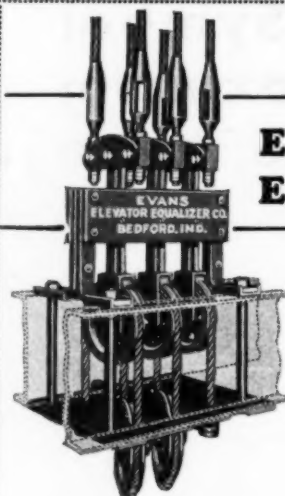


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Vol. XCVIII No. 14 }  
Weekly }

BALTIMORE, OCTOBER 2, 1930

{ Single Copies, 20 Cents.  
\$6.50 a Year. }

## Leaders in Industry Point to Definite Evidence of Business Upturn

**A**SSURANCE that the long-continued business decline has reached bottom and that improvement is noticeable comes from many sources. In spite of pessimistic interpretation by some newspapers of a recent statement issued by the Federal Reserve Board, dealing with conditions for August and in the early part of September, reports which we have assembled definitely indicate that seasonal buying and the replenishment of depleted stocks is gathering strength. In making a comparison of conditions today with 1929, the public generally fails to appreciate the fact that last year was a record in many respects. Business today throughout the country, while below that of 1929, is ahead of many previous years. Results of the survey we have made substantiate the position taken several months ago by the MANUFACTURERS RECORD, when we expressed confidence that the opening of fall would show an improvement in business conditions, since depletion of stocks of goods would soon demand replacement. August evidently was the low point, although some concerns in nation-wide trade found a quickening of demand during July.

It is up to the individual to do his share in furtherance of trade, to use the momentum of seasonal demand to carry the country forward on a higher level of activity. Some far-seeing executives, appreciating the situation and recognizing their opportunity to buy needed supplies in many cases at prices below cost of production, are acting upon their knowledge of conditions and future requirements. Leaders in many of the country's largest industries make no secret of the fact that they have been taking advantage of prevailing prices which are lower possibly than they will be for a long time to come. They have been stocking up the necessary raw materials, some even venturing the prediction that actual shortages are likely to develop in some commodities. Such is the position of executives who are nationally known for their business ability. They base their decisions not on guesses, nor are they guided by sentiment; experience has taught them to gauge business trends and govern their action accordingly.

Believing no more timely service can be rendered

the readers of the MANUFACTURERS RECORD than to present conditions as October opens, we have assembled data embracing a cross-sectional summary of business in many lines and in various parts of the country. In answering specifically a request by the MANUFACTURERS RECORD for their views on present conditions and the trend of trade since mid-summer, the following heartening statements of nationally known business leaders representing such basic industries as iron and steel, lumber, textiles and agriculture have been sent us.

George M. Verity, chairman of the American Rolling Mill Co., Middletown, Ohio, wired the MANUFACTURERS RECORD on September 23:

"In our opinion the bottom of the current business depression has been passed. Statistical records indicate August probable low point but in our case July was low, as our tonnage bookings in August were 6 per cent greater than July, while so far during September our bookings are 25 per cent more than August. We serve all classes of industries which use sheets; that is stove, refrigerator, electrical, automobile, railroads, building and numerous others, and since these industries have been using inventories at a greater rate than they have been buying we confidently anticipate each month will continue to show increased activity."

Turning to the lumber industry, we get an equally inspiring report from R. A. Long, chairman of the board of the Long-Bell Lumber Corporation, Kansas City, Mo., who wires:

"We found July the low point for volume in quantity of business booked, with increase in this respect for August of 15 per cent over July and thus far in September an increase over August of 15 per cent. Stocks of retail lumber yards throughout the country are low which we think affords a basis for buying in a rather substantial volume as soon as the owners of such yards can satisfy themselves that the public is again developing confidence to the point of beginning to buy, which the above mentioned comparison indicates may be the situation to an extent at least."

As head of one of the great machinery manufacturing concerns of the country, Charles Piez, chairman of the board, Link-Belt Company, Chicago, informs us that:

"August was our lowest month. Inbound business represented 75 per cent of normal plant capacity. September about the same. Our confidence in the future is shown by the fact that we have



placed contract for pulverized fuel plant amounting to \$125,000 at our Indianapolis foundry."

Otto H. Falk, president, Allis-Chalmers Manufacturing Co., Milwaukee, Wis., wires:

"While present business conditions continue quiet, there appear to be some slight indications of approaching improvement which it is hoped will result in an early favorable change in the situation. Inventories are low, money is easy and a slight increase in public confidence should cause important substantial improvement."

As to the textile industry, in which the South holds such a dominant position, government statistics for the year ending July 31 show that Southern spindles were active to a high degree in spite of curtailment in many mills. In giving an account of present conditions in the textile industry of the country as a whole, George A. Sloan, president of the Cotton Textile Institute, New York, wires as follows:

"There has been a marked increase in demand for cotton textiles since the middle of August. The aggregate during the past two weeks closely approximates normal at this time of year and it is significant that the increasing volume has been accompanied by a pronounced improvement in prices. Staple fabrics have been selling at prices lower than at any time during past ten years, made possible by exceptionally low cost of raw cotton. The pressure for prompt delivery is noticeable and it is obvious that buyers of staple cotton fabric have concluded that now is the time to build up depleted inventories."

An important factor in the business revival which must be reckoned with in any analysis of buying power or trade trend is the farm population and the rural communities dependent upon the farmer. On this point Horace Bowker, president of the American Agricultural Chemical Company, New York, makes some pertinent statements in the following dispatch:

"The agricultural situation is an important factor in the outlook for general business. While current commodity prices are an unfavorable influence at the moment, recent surveys which I have made indicate that improvement may be looked for."

"Students of the business situation are apt to overestimate the importance of wheat prices as affecting agricultural prosperity. The center of wheat production is moving steadily Westward, where specialized farming at low per acre operating costs enables the wheat grower to compete profitably in a world market. Wheat growing in the East is now largely a part of rotation farming and the income of the farmer is balanced by livestock and crop diversification. I am of the opinion that present low wheat prices will result in rapid absorption of surplus and that the situation will quickly improve. Drought has reduced supplies of feed crops and this will undoubtedly hasten elimination of the wheat surplus."

"I believe we will go into the new crop year in a sound basic position. Recent events have clearly shown the need for a far-seeing agricultural policy. The keystone around which that policy must inevitably be built is reduced unit production cost of farm crops. Today we measure the farmer's buying power in terms of the hypothetical total value of crops, but the farmer only spends the difference between what he gets for his product and what it costs him to grow it. His net income is the deciding factor in industrial prosperity and his net income can be improved by reducing his costs quite as much as by increasing the price he gets for his crops. Recent surveys disclose that at least one-third of the farmers are producing the money crops of the country at a unit cost low enough to safeguard them against loss at low price levels and a relatively small recovery in prices will put the farmer in a buying mood. I believe agriculture is about to turn the corner."

Referring specifically to conditions and expectations in the Southern states, an analysis of data assembled from a cross-sectional summary made by the MANUFACTURERS RECORD shows that business has improved since August and that prospects are good. Retail merchandising picked up to a gratifying extent during September, while some industries are more active, and construction with the exception of residence building has been pronounced. Results of this

cross-sectional survey develop a point of importance in the fact that residence building is below normal as much as 50 per cent in some communities. There is being created a pent-up demand for houses which is certain to make for future construction activity. This, in turn, will call for expenditures not only for building materials, but for house furnishings and supplies, including almost every product of manufacture. Thus it is reasonable to assume that were home-building normal through the country, business generally would not have experienced such a pronounced recession during the past months. We invite the attention of our readers to the detailed review of Southern business conditions and prospects published on pages 42 and 43.

### Communism Through School Nationalization Proposed for America

TEN "principles" for Federal Government intrusion into the educational activities of the individual States, as enunciated by the steering committee of the National Advisory Committee on Education, create a fog of confusion through which only Government control of all American schools can be clearly seen.

The first principle, "The Federal Government has an obligation to aid public education in the States," is, in the manner contemplated, a false premise at the outset. Equally fallacious are the statements that "the Federal Government should give some financial aid to education in the States" and that financial "grants" to States should be made of "benefit to special groups of the population."

Not one of the arguments which may justify Government cooperation with the States in highway construction is applicable in any way for proposed Government control of the Nation's schools. Every American principle of individual liberty and of States' rights would be violated by the proposed movement.

Direct warning of the extreme to which this proposed Government intrusion is likely to be carried is presented in the tenth principle: "New participation of the Federal Government in education, designed to meet changing economic, social and political conditions, should be inaugurated under tentative policies," and so on. Instead of establishing a reasonable check on the Government in its proposed invasion of each State's rights, this organization proposes constantly "to inaugurate new participations," under "agencies created by the Federal Government to meet new needs," these agencies "to be granted the autonomy and financial facilities to overcome the inertia of traditional practice"—whatever that may mean.

Under this policy, nationalization of the schools would become inevitable, and nationalization of the school system would be a tremendous and irrevocable stride toward communism's aim to subordinate the individual to the State.



## Credit Supply Vital to Orderly Marketing of Crops

**R**ECENTLY the MANUFACTURERS RECORD suggested that the Federal Reserve branch banks of the South reduce their discount rates in order to aid the Southern farmer in the more orderly marketing of his crops. Bearing on this subject, the following statement has been received from C. C. Walsh, chairman of the board and Federal Reserve agent of the Federal Reserve Bank of Dallas, Texas:

"Referring to your leading editorial in the MANUFACTURERS RECORD of September 18, entitled, 'Cheaper Credit for the Cotton Producer,' which I have read with great interest, and with the views of which I heartily concur, I enclose herewith copy of Circular No. 9, series of 1930, issued by me on September 10, 1930, on the subject, 'Orderly Marketing of Agricultural Products and Livestock,' the substance of which I think you will find in strict consonance with the tenor of your editorial.

"At the same meeting, our Board of Directors reduced the discount rate from 4 per cent to 3½ per cent on all classes of paper of all maturities, as per copy of Circular No. 8, series of 1930, herewith enclosed, correlating the substance and intent of our orderly marketing circular."

The substance of circular No. 9 on "Orderly Marketing of Agricultural Products and Livestock," issued by the Federal Reserve Bank of Dallas to the member banks of the district reminded them that credit facilities of the Dallas Federal Reserve Bank were available for the seasonal movement of crops to market. The circular reiterated statements made in previous years that the Federal Reserve Bank stands ready and willing to render its services to its member banks in any legitimate and proper manner consistent with law and sound banking practices.

Notes, drafts and bills of exchange, secured by warehouse receipts, shipping documents or other evidences of title to agricultural products, notes secured by chattel mortgage on cotton or grain stored on the maker's farm, properly covered by insurance and protected from the weather, and notes secured by chattel mortgage on livestock, are eligible for rediscount with the Federal Reserve Bank. It is of course understood that all paper offered must be acceptable from a credit standpoint, and unsecured paper is equally acceptable where it possesses the inherent qualities of eligibility and credit acceptability.

The purpose of the circular was to emphasize the desire of the Federal Reserve Bank of Dallas to cooperate to the fullest extent in making available the resources of that institution in any sound manner to permit the orderly marketing of crops and livestock.

In its announcement of a reduction of discount rates mentioned in circular No. 8 in the foregoing, the board of directors of the Federal Reserve Bank of Dallas established, with the approval of the Federal Reserve Board at Washington, a rate of 3½ per cent on all classes and maturities of rediscounts and member banks notes. This is a reduction from the former rate of 4 per cent and became effective September 9.

Up to the time of going to press, we have not learned of any similar action by other district banks of the Federal Reserve system. In view of the fact that the agricultural industry needs every legitimate

assistance in marketing its crops, we believe the policy of reducing discount rates would be of inestimable value not only to the Southern farmer, but to the Southern business man and to business generally throughout the country. Without profitable agriculture, the buying power of a very large percentage of the population is reduced, and the adverse effect on trade is obvious.

## Lake Port Coal Rate Question

**F**ROM the beginning, several years ago, of the lake port cargo coal rate question, the MANUFACTURERS RECORD has taken the position that to increase the differential between the Appalachian coal fields and the fields of the North on coal shipments to the lakes was not regulation of freight rates but regulation of industrial conditions under the guise of rate regulation. This position was sustained by the Federal District Court, and now Northern coal operators are attempting to secure a higher differential against the South on its coal shipped to lake ports. It is contended that the Northern coal operators, in the rate differential they are demanding, would stifle competition and that manufacturers and domestic consumers of coal in the North would be penalized. The whole subject is one of profound interest, since it is feared that a precedent would be established by creating an arbitrary freight differential which would be detrimental to all industry.

Elsewhere in this issue is published an article on the lake cargo rate controversy, written from the viewpoint of a Southern coal operator. It outlines the situation on the eve of the hearing which is to be held in Chicago on October 6.

## Government's Economy Problem

**T**ENTATIVE plans of the Navy Department to close the armor plate plant at South Charleston, W. Va., and the torpedo plant at Alexandria, Va., indicate in the Federal Government the same problem which private industry finds in endeavoring to practice economy without contributing to business depression and unemployment by curtailment of working forces.

In contrast with the Navy's plan for curtailing expenses by reducing the cruising radius of the fleet, the proposed closing of these or other yards involves the discharge or furlough of many employes. Whether this enforced idleness for hundreds of individuals, with their dependents, will be compensated by a saving of \$280,000 a year to the Government is a question for the Government to determine.

On the whole, one may well question whether such economy at this particular time is an outstanding virtue. Over-strained economy may do more harm than good in Government activities as well as in private industries. For these and other reasons the whole subject should have careful consideration.

# Business Revival Under Way Throughout the South

## Sustained Seasonal Buying and Replenishment of Stocks Mark Business Upturn as Fall Advances

**B**USINESS in the South and Southwest has improved since August, industries are resuming work or speeding up, and prospects are bright in the composite opinion of virtually half a hundred chambers of commerce in representative cities in the 16 Southern States, in reports to the MANUFACTURERS RECORD.

The most impressive feature in these reports is the spirit of courage and optimism almost unanimously expressed. In only one instance was a sign of depression in morale noted, and this savored rather of inertia than of pessimism. As specific answers to such specific questions as: Has business increased since August? What are prospects for balance of year? etc., the reports were not susceptible to glittering generalities or local ballyhoo, but gave in straightforward fashion a birdseye view of the entire South.

"Business is beginning to open up; much road work and other construction has been undertaken and it is entirely possible that business will pick up to a gratifying extent in the fall," was the summary of one report, and this may be accepted as typical of all, individually and as a whole.

That business and industry in general and in their component lines had hesitated to the end of August, no report denied, but the condition was accepted as a part of the depression which has overspread the whole world. Miscellaneous construction was not up to the usual mark, residential building was far below normal, manufacturing had not been normally brisk, and wholesale and retail trade had merely kept step with other activities. Unemployment, however, does not appear to have been generally severe in the South, nor had trade felt the summer drought in appreciable measure.

### Notable Change for the Better

With the entry of September, a new situation seemed to open. Manufacturing industries picked up in almost all industrial areas; the wholesale, jobbing

and retail trades felt the impulse; construction increased; a substantial percentage of the unemployed were called to work, and a new spirit was instilled in the people.

For Alabama, the composite report disclosed an increase of business since August, largely involving the building trades, and prospects for the balance of the year were pronounced good. Improved construction business involved homes, business houses, highways and street work, and the unemployment percentage was moderate.

In Arkansas, the retail business seemed to be the first to experience revival in substantial form. State and county road work combined to stimulate highway construction and much business construction got under way. Employment at the opening of September was estimated around 20 per cent under normal, but lumber and other industrial plants were beginning to recall workers temporarily laid off.

During the past 60 days, "a pronounced feeling for the better" in Florida culminated at the close of August in an increase affecting "practically all lines of industry." Prospects were bright for better prices for citrus fruits, because of demands from increasing numbers of canneries. A great tourist season is anticipated and preparation for the influx now promotes building and other construction. In Jacksonville, where the unemployed were 3 per cent of the population, nearly half were expected to go to work.

### Nearly Normal Point Is Reached

Retail merchandising and certain manufactures were the first lines in Georgia to respond to the September opening invitation. Construction work increased and employment conditions were reported satisfactory, and "nearly normal" at Savannah and Thomasville, for instance. Prospects were considered "fair" for the future.

Improvement in business conditions in Kentucky was said especially to include mercantile trade, lumber and agricultural implements. Business men look for better business in the winter and will not be surprised by "a pronounced acceleration" after the turn of the year. Louisville reported construction some-

what larger than in 1929, and no complaint on unemployment was voiced from any quarter.

Increase of 15 per cent in business since August in Louisiana outside New Orleans and almost that proportion in the Crescent City was indicated in reports from that State. Stimulation for the natural and normal revival is expected through expenditure of approximately \$100,000,000 to be provided by the State for roads and bridges, and for streets and other urban factors in New Orleans. As viewed in the parishes, the prospect for the future is good, while New Orleans feels it to be "extremely bright." The parishes do not find unemployment depressing and New Orleans reports a slight subnormalcy to be improving.

Reports from Mississippi, while conservative, indicate satisfaction with recent improvement and hope for the future. Development of natural gas in that State opens great industrial opportunities, and the people show alertness to take advantage of them. One area, for instance, is confident that "the economic curve is on the upgrade," but does not look for any extraordinary spurt in the remaining months of this year. Dairying has become an industrial factor in the State and as always is found a very present help in time of trouble.

### Buyers Interested in the South

All reports from Missouri tell of increased business since August, in "decided" proportions for textile manufacturers and jobbers and satisfactory conditions in steel. More buyers are reported as appearing in the larger trade centers; more construction is developing, and steady improvement is expected on all lines, without any spectacular spurt. Unemployment runs from 8 per cent in some sections to a materially higher figure in others, but will fall off as industry and business improve.

Increase in business in North Carolina is reported particularly in hosiery, furniture, veneers, plywoods and retail trade and some industries which have been on short time are expected to resume full time within 60 days. As typical of conditions, one hosiery mill is installing new machinery and will in-



crease its working force from 600 to 900, and another is completing a \$750,000 addition to its plant. The Piedmont area finds "a marked change" since August and believes the corner has been turned. All North Carolina seems to look to the future with confidence.

Oklahoma notes business increase especially in the retail trade, indicating that the people have money to spend and now are beginning to spend it. Construction work hovers around normal and prospects for the balance of the year are at least fair. The diversity of the State's natural resources and manufacturing industries will be a helpful factor and conditions are such that acceleration in production can easily be made proportionate to demand.

#### *Conditions Inspire Further Hope*

Gratification prevails in South Carolina over increase in retail trade, the building trades, textile manufacturing industry and agriculture, and prospects are considered "good," "better" and "encouraging," as some of the various reports put it. In more than one section, construction work is reported as "better than normal," residence construction at one point running 10 per cent above the usually satisfactory average. Unemployment has not attained really disturbing proportions.

Increased activity in trade and industry in Tennessee is the composite feature of reports from that State, and "manufacturers and others look for a considerable uptrend of business during the balance of the year." Construction work is steady, branch managers of large concerns in other States say they find conditions good in Tennessee and the unemployment status is "rather favorable." Belief that prospects are good is unanimous.

In the wide range and multiplicity of its commercial and industrial enterprises, Texas finds business better now than in August and is pleased with prospects for the future. The cotton industry has been active and has helped to keep down unemployment, and inquiries from outside the State for land indicate that people in other areas are turning their eyes toward Texas.

Improvement in conditions in Virginia since August is conservatively described in reports, with emphasis laid on retail trade, building materials, woodworking and trunks and bags. General construction work registers around normal and employment, while spotty in some sections, is not greatly depressed in others.

Recent improvement in business in West Virginia is ascribed to nearly all of its industrial and trade enterprises, and prospects for the rest of the year are deemed good. Construction work has by no means been neglected, and

any slack may be taken up gradually as economic conditions improve.

#### *Survey Shows Improvement Sound*

This résumé of conditions in individual States may be regarded as a fair cross-section view for the South and the Southwest. Quite noticeable was the fact that residence building was far below normal, dropping to less than 50 per cent in some sections. Even in those communities reporting increased construction, home building was below normal. It is a fair assumption that the next several months will show a demand for houses which naturally will bring about activity in this class of building.

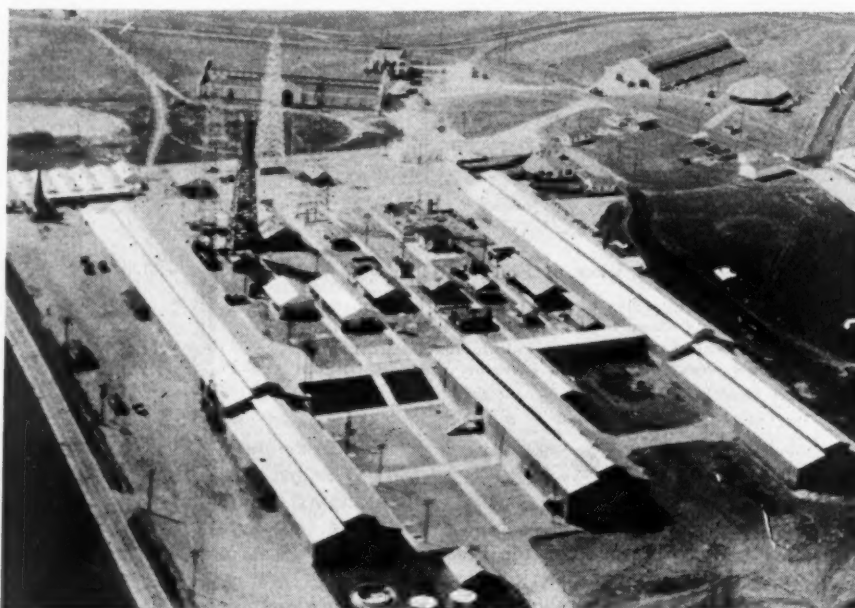
#### **\$1,000,000 Power Machinery Contract**

Hawks Nest, W. Va.—The New Kanawha Power Co., a subsidiary of the Union Carbide & Carbon Corp., New York, which is building a dam on New River, near Hawks Nest, has awarded contract to the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., for four 30,000-kva., 3-phase, 6900-volt, 25-cycle, 150 rpm, vertical waterwheel generators with direct connected and pilot excitors. The contract will involve about \$1,000,000. Power will be transmitted at 66,000 volts to an industrial plant at Boncar and will be used principally in electric furnaces, it is said.

## Petroleum Exposition at Tulsa

The Seventh International Petroleum Exposition and Congress, to be held in Tulsa, Okla., October 4 to 11, promises to be the greatest yet planned, according to W. G. Skelly, president. During the show annual meetings of directors will be held by the American Petroleum Institute; the American Society of Mechanical Engineers; the National Petroleum Congress and other organizations. A continuous program of demonstrations ranging from acceptable field and plant practices to safety first and first aid work, will be a feature. The following organizations are actively co-operating with officers and directors of the show:

The American Petroleum Institute, especially the board of directors, the division of standardization and the division of production and development engineering, petroleum division; the American Society of Mechanical Engineers, petroleum division; the American Chemical Society; the American Welding Society; the American Association of State Geologists, and the National Safety Council, petroleum division. The United States Department of Commerce, the U. S. Bureau of Standards, the geological surveys of Oklahoma, Louisiana, Colorado, Kentucky, Texas, Arkansas, New Mexico and Kansas are also participating, as are the governments of Venezuela, Canada, Mexico, Germany, France and Roumania.



**\$1,350,000 Plant of the International Petroleum Exposition and Congress at Tulsa, Okla.**



## A Building Stone of Remarkable Qualities From Cumberland Plateau of Tennessee

By

JOHN OMAN, JR.  
Nashville, Tenn.

IN rather an unusual manner, an interesting industry has been developed in the beautiful stone found in the vicinity of Crab Orchard and Crossville, on the Cumberland Plateau in Tennessee.

H. C. Hibbs, well known architect of Nashville, a few years ago received commission to build a group of buildings for Scarritt College. A short time previously he had supervised construction of the attractive Southwestern University buildings at Memphis and he desired a stone nearer at hand that would somewhat approximate color effects secured through the use of a

stone from Arkansas. To that end, he called in consultation the then State Geologist, Wilbur Nelson, and asked for help in his search for this material. After some study, Mr. Nelson advised that the stone could be found in the Cumberland Plateau and probably along the line of the Tennessee Central Railroad.

Officials of the Tennessee Central willingly cooperated in locating such a stone, with the result that Mr. Hibbs opened a quarry site in the vicinity of Crab Orchard. Thor-

ough tests showed the material to be satisfactory and bids were taken for quarrying and delivering the stone to the building site in Nashville, with John Oman, Jr., as successful bidder.

While getting out stone for the Scarritt College buildings, the contractor naturally investigated the vicinity and found two other very interesting deposits and began working them in a small way. Both quarries produced stone with exceptionally true beds and attractive colors. The fact that the beds were so straight overcame the handicap of having to haul the stone to the railroad, several miles away. One quarry produced stone from two to 18 inches in thickness, the other from  $\frac{3}{8}$  of an inch to about six inches. From the first quarry, material was used largely in the shape of rubble, for building exterior walls. From the other quarry it was used chiefly as flagging.



General View of Flagging Quarry

Several quarries of this type have been opened, producing stone from  $\frac{3}{8}$ -inch to 6 inches in thickness, suitable for use as rubble for flagging and for general interior and exterior purposes.



### Crab Orchard Stone for Floors

A view of the Church of Heavenly Rest, New York, designed by Mayers, Murray & Phillips, architects, New York. The floor consists of Crab Orchard flagging worked with a dark material.

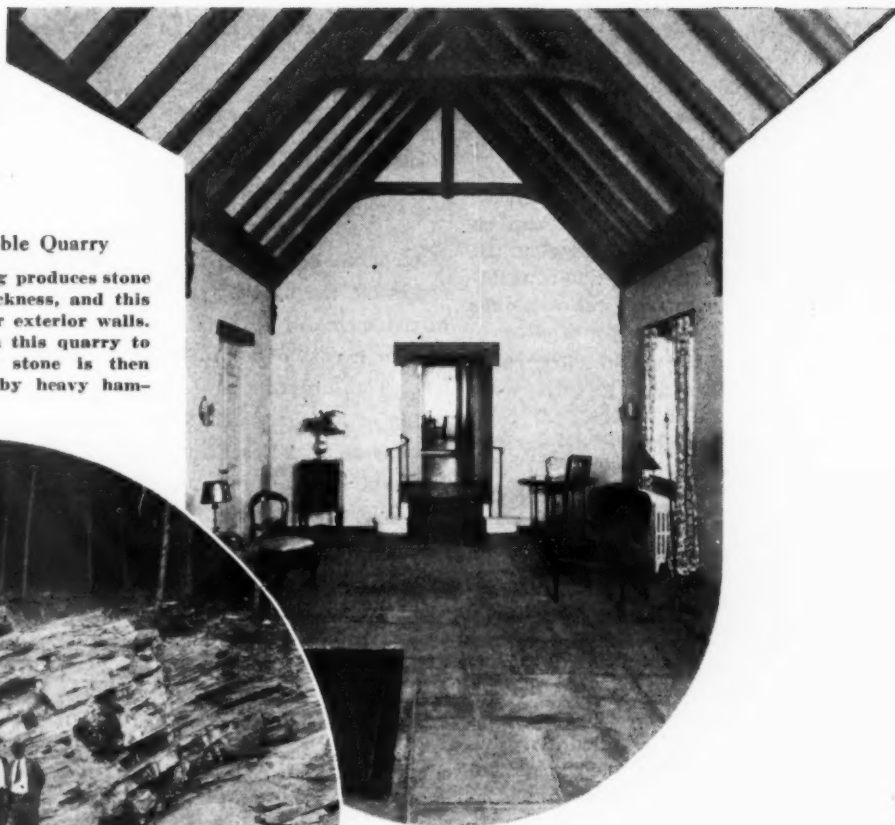


### A Living Room Floor of Stone

Although the material is very hard it may be coped or broken to very straight lines. In working it into shapes and moldings it is necessary to use carborundum equipment. Similar material, less thick, has been used for attractive roofs.

### General View of Rubble Quarry

One quarry now operating produces stone from 2 to 18 inches in thickness, and this material is largely used for exterior walls. Blasting powder is used in this quarry to open up the ledges; the stone is then broken to required sizes by heavy hammers, slips and wedges.



quarter of an inch its entire length. There is just enough slope to the floors to drain water out of the quarries. Overburden consists of three or four feet of soil and from 18 inches to three feet of soft waste rock.

So few natural seams exist in the quarries that it is necessary to channel quite a bit to make free ends. This channeling is done with air hammers and broaching tools operated by portable compressors. Since each ledge is separated by a thin film of substance similar to fire clay, quarrying is a comparatively simple matter. Stone is broken to accurate lines, just as it lies, by the use of cleavers and hammers. Recently, an air hammer has been devised which facilitates this operation. The stone is then picked up by hand and hauled to storage yards by small trucks. The thicker ledges are broken out by use of slips and wedges.

In the rubble quarries, a small amount of blasting powder is used to open up the ledges and the stone is broken to required sizes by use of heavy hammers. Slips and wedges also are utilized.

Crab Orchard quartzite has been used for exterior and interior walls, floors, steps, copings, window and door sills, and also for roofing. It has been shipped as far east as Boston, as far west as Honolulu, as far south as St. Petersburg and as far north as Minneapolis. Very little stone roofing has been produced in the United States, but roofing of this stone is so attractive it is almost

noticed, indicating that the stone has sufficient resis-

Prominent architects took kindly to the stone and demand grew to such an extent that the Crab Orchard Stone Company was organized in August, 1929. Much energy and money was expended in pushing production and sale of this stone, which is marketed under the trade name, "Crab Orchard Quartzite." Geologists and mineralogists define quartzite as a metamorphosed sandstone and add that it differs from sandstone principally in its hardness and to some extent in a fairly pronounced crystalline character. These qualities are due to an abundant siliceous cement around the grains of quartz of the original sandstone, continuing their physical and optical properties.

Laboratory tests show silica, 93.54; iron oxide and aluminum, 4.48; lime, .85; a trace of magnesia; and water, 1.06. The stone weighs 162.7 pounds per cubic foot. In heating and cooling tests, no indications of spallings have been

tance for use in acid process furnaces. Tests are now being made to determine other uses.

In color, Crab Orchard stone runs to the monotone for probably 50 per cent of the quarry output, with blendings to pepper-and-salt; ripple pink; fern leaf of a golden and reddish hue; gold blending to bluish grey; pink and grey; and purple. For floors or for walls, these color tones stand out and add materially to the beauty of the surface.

The flagstone quarries, of which the Crab Orchard Stone Co. has several in operation, resemble great smooth floors made up of thin strata or ledges. These floors are described as straight and smooth "beyond anything that has been developed in other quarries." The stone is almost as true as if it had been sawed. Some time ago, there was moved out from its bed a piece 92 feet long, 4 feet wide and 2 inches thick, which did not vary in thickness as much as a



certain to become popular on the best type of buildings. A New York architect who used some of it said it made roofs that looked like beaten gold.

While Crab Orchard quartzite is a very hard material, as the name indicates, it can be coped or broken to very straight lines, so that in many instances, especially in landscape work, it can be handled cheaper than other flagging. In order to work it into shapes and mouldings, it is necessary to use carborundum machinery.

To the layman, the outstanding characteristic of this material is its wide variety of beautiful colors. A New York writer, after seeing the quarries, had this to say of it: "Nature was lavish with her paint pot and generous in her designs when, ages ago, she smoothly deposited, layer upon layer of Crab Orchard stone, for the use and delight of builders today."

This enduring quartzite meets the present demand for more color in architecture and landscaping. Quarries in the wooded hills of East Tennessee yield this material for great cathedrals, towering universities with their classical colonades, for public buildings and spacious homes and gardens, where artistry and beauty are a major consideration.

The wide flat surface that emerges from this magic kiln has the beauty and softness of tone of old alabaster and other qualities that only nature can portray. In several hues, ranging from deep sand to a mellow yellow and shading into orange or copper, are plainly discerned water waves and swirls. The buff, mauve, russet and soft ashes-of-roses and heliotrope, rival the smoke-reds and grey-blues and tans, while in harmony and uniformity the vari-colored combinations contribute their storehouse of design.

Pigments of many colors are fashioned in a plain background, forming whirls, diagonals, stripes and medallions, unique modernistic patterns, and splash and bespotted effects. Now and then a lace-like imprint of ancient foliage and ferns is seen in a mottled surface of old rust and yellow ochre.

Crab Orchard quartzite is produced in many thicknesses and sizes, making it suitable for floors, walls, stairs, balustrades, mantels and other interior decoration. Insets of this colorful stone with its variety of markings make an attractive trimming. But it is not confined to interiors. It is equally beautiful when used as flagging, for piers and gateways or for garden furniture where color and lasting quality is desired.

Shingles of Crab Orchard stone make a distinctive and decorative roof, for the great variety of color blends well with any background.

## Completing \$8,210,000 Railroad Improvements

**Cotton Belt Railway Makes Grade and Line Improvements in East Texas and Provides Short Line from Malden, Mo., to Memphis, Tenn., Through St. Francis Basin**

An extensive program of improvements started by the Cotton Belt Route in the spring of 1928, is nearing completion at a cost of approximately \$8,210,000. This program covered the rehabilitation of all that part of the company's railway line in East Texas between Mt. Pleasant and Corsicana. Work was begun at Mt. Pleasant and construction handled in sections to avoid disturbing too large a mileage of track at one time. Improvements consisted of 28.65 miles of new line, replacing portions on which it was not economical to revise grades; 90.20 miles of line on which the grades have been revised to a maximum equivalent of 1 per cent momentum; 20.80 miles of line on which grades were not revised but on which improvements were made, such as the restoration of banks, improved drainage and the construction of culverts and bridges.

As illustrative of the achievements of the railway engineers, the amount of curvature on the St. Louis-Southwestern Railway lines was reduced from 4875 degrees of central angle to 3458 degrees, which is equivalent to the elimination of four complete circles. The total amount of rise and fall was reduced from 5678 feet to 3744 feet. This part of the Cotton Belt line is now laid with 85-pound rails and is well ballasted with washed river gravel and all curves of more than four degrees and all excessive grades have been eliminated. Sections of line heretofore subject to inundation by the overflow of a large number of creeks have had the grade line raised and have been relocated on higher ground.

Heavy work on the project involved 5,200,000 cubic yards of earth excavation and embankment; 15,072 cubic yards of concrete; 64,540 lineal feet of tile drains; elimination of pile trestles and replacement with 6,532 lineal feet of culverts and other permanent structures at different locations; 523,000 cubic yards of ballast, and 19,000 tons of rail. In addition to the work of revising the grade and line and rehabilitating the main track, a \$600,000 freight yard was constructed at Tyler to replace an old yard near the business section of the city. The new yard consists of four

receiving and departure tracks, eight classification tracks, together with the necessary auxiliary track. Other equipment includes modern heavy duty track scales, icing racks, emergency car repair facilities and a yard office. As locomotives are now enabled to handle an increased tonnage, the company expects to effect a considerable saving through a reduction in the number of trains required to handle the traffic. This part of the program is estimated to cost \$5,500,000.

In 1928 the St. Louis-Southwestern entered into contracts which were approved by the Interstate Commerce Commission, to provide for a short line from Malden, Mo., to Memphis, Tenn., through the alluvial St. Francis Basin in Southeast Missouri and Northeast Arkansas. It secured by an exchange of stock the Gideon and North Island Railroad from Malden to Gideon, Mo., 9 miles; the Deering Southwestern Railway from Caruthersville to Hornersville, Mo., 30 miles; the Blytheville, Leachville & Arkansas Southern Railway from Leachville to Rivervale, Ark., 19.09 miles; the Mandalay branch, 3.82 miles, and the Arkansas Short Line from Trumann to McDonald, Ark., 32 miles. A short line through this territory to Memphis will result from the construction and extension of the Gideon and North Island from Malden to Deering, a distance of 27.31 miles; reconstruction of the Deering Southwestern from Deering to Hornersville Junction, 14.44 miles; the use of 2.08 miles of the existing St. Louis Southwestern track through Hornersville, and the construction of 10.41 miles of track from Hornersville to Leachville, all of which will be opened to traffic this month.

At Leachville 0.24 mile of Frisco track is used to connect with the Blytheville, Leachville & Arkansas Southern, which has been rehabilitated to Caraway, a distance of 13.06 miles. From Caraway a line 15.705 miles in length is being built to Trumann, where connection is made with the Arkansas Short Line, which will be operated to McDonald, a distance of 31.28 miles. Plans call for using the Missouri Pacific tracks from McDonald to Memphis. The length of the new line from Malden to Memphis is 148.9, as compared with 210.7 miles of the present route via Brinkley. The cost of the St. Francis Basin improvements is estimated at \$2,700,000.



# Southern Coal Operators Present Their Side of Lake Cargo Coal Rate Controversy

By

J. V. SULLIVAN,  
Acting Secretary, West Virginia Coal  
Association, Charleston.

**S**OUTHERN coal operators representing tonnage produced south of the Ohio River in West Virginia, Kentucky, Virginia and Tennessee will be heard at Chicago on October 6, before Examiner Charles M. Bardwell of the Interstate Commerce Commission, in opposition to the demand of the Pittsburgh and eastern Ohio coal operators for greater freight rate advantages over the southern districts on shipments of Lake Cargo coal.

The Chicago hearing is another inning in the celebrated Lake Cargo controversy which had its genesis in the Bolleau case in 1910 and has been continued intermittently for 20 years. It is a competitive struggle between competing coal districts for business in consuming markets that use in excess of 30,000,000 tons annually.

Before the Interstate Commerce Commission the northern operators always have been the aggressors, seeking higher rate advantages over the southern districts, on a mileage basis, with the ultimate aim of excluding southern coals from the markets of the Northwest through the erection of freight rate barriers that would give the Pittsburgh and Eastern Ohio operators a virtual monopoly of the Lake markets.

Before the Commission the northern operators have based their recurrent demands on the difference in mileage between the competing districts. Before railroad rates were fixed by the Commission, the railroads, unfettered by control, fixed the differential at 9 cents a ton between the northern and southern districts. This advantage to the northern group was increased by the Commission to 19 cents in 1912; to 25 cents in 1917; and then to 45 cents in 1927. A year later the carriers agreed on the existing differential of 35 cents.

## *High Freight Rates a Barrier to Distant Markets*

Nationwide interest in the Lake Rate cases has developed from the persistent efforts of the Pittsburgh operators to make mileage the main factor in the rate adjustment. The mileage theory of rate-making is opposed by larger shippers on the ground that modern progress in transportation has been promoted by the elimination of distance as the yardstick for the measure of rates. Manufacturing industries seek to preclude the erection of freight rates that would deprive them of distant markets. The

agricultural industries of the West have opposed freight rate adjustments that prevent the entry of their products at the Atlantic seaboard for export trade and for consumption in the densely populated East.

Southern coal operators always have resisted the efforts of the northern operators to exclude their coal from consuming markets, asserting that the Pittsburgh shippers are endeavoring to use the freight rate structure to overcome self-imposed handicaps in production after they have been worsted in a competitive struggle.

Vigorous competition in the coal consuming markets of the country is the basic cause of the extended Lake Cargo freight rate litigation. Twenty years ago the Pittsburgh and Ohio operators dominated the Lake markets, shipping 68 per cent of the Lake coal, although their rate advantage then was only 9 cents a ton. Extended strikes, uneconomic wage scales and other handicaps lessened the ability of the northern districts to compete with the southern districts where more flexible conditions prevailed. Lake consumers found they could buy an adequate supply of coal from West Virginia and Kentucky mines at reasonable prices without interruption in the supply from recurring strikes. These consumers have been difficult to wean from the use of southern coals.

## *Northern Shippers Have Minimum Rate Advantage of 35 Cents*

The northern operators, in 1924, signed the Jacksonville wage scale, but in a few months many of them repudiated this agreement. They placed their mines on a non-union basis and are now operating their mines on wage scales as low, and in many cases, lower than those paid in the Southern fields. They are operating seams of coal as economically mined as those in the South and with their minimum freight rate advantage of 35 cents in their favor, they are rapidly increasing their shipments to Lake markets. This in spite of the fact that many mines closed down for a long period and have only come back in operation during the latter part of 1929 and early part of 1930. It is very apparent that under these conditions and

under the present freight rate differential, the northern fields have such a tremendous advantage over the southern fields in this Lake market that they will eventually regain a large part of the tonnage they have lost. This is a slow process and is especially true since the southern producers and shippers of coal have for years given their customers a more scientifically prepared product. In recent years the northern fields have also mechanically equipped their mines, securing better facilities for preparing their coal, and this is another advantage that no longer belongs exclusively to the southern fields.

It is felt by many that the northern producers are pressing their present complaint before the Interstate Commerce Commission in the hope of getting an early favorable decision before actual results of their lower wage scale, better mining practices and better preparation show up fully in their tonnage shipped to the Lakes. Northern operators are rapidly recapturing large portions of the Lake cargo business and have a tremendous advantage on all this business for steam and general coal. The northern shippers realize that if they do not get a widening of the differential at this time, they will have no opportunity in years to come. In other words, they are trying now to capitalize conditions growing out of antiquated mining systems by adequate preparation and economic wage scales and before the result of their modern practices is known they are trying to get the Interstate Commerce Commission to give them additional freight rate advantages to compensate them for their past economic sins.

## *Seek One Blanket Rate on Lake Cargo Coal*

In connection with the transportation situation, the southern operators and the southern railroads have taken the position that mileage is not an important factor in transportation, especially when applied to physical conditions on roads of the southern carriers. In the previous case it was shown that the southern railroads can carry coal to the Lakes two miles for what it costs the northern railroads to handle similar coal for one mile, and on this theory the southern roads might well have a lower rate to the Lakes. As a matter of fact, the southern operators are contending at this time that there should be just one

blanket rate on Lake cargo coal from the Appalachian fields to the Lakes. As an illustration of the little effect distance has on the cost of transportation, southern operators call attention to the fact that the Chesapeake & Ohio Railway Company now has locomotives that can haul a train of one hundred and thirty 70-ton loaded coal cars from the Russell, Kentucky, assembling and classification yards to the Lake port at Toledo, Ohio, with only two stops, one take on water, and another stop to change crews. The locomotive runs the entire distance in a period of 12 hours from a point south of the Ohio River across the state of Ohio to the port at Toledo. It is not necessary to coal the engine en route. This means that more than two-thirds of the distance from the southern coal fields to the Lakes is represented by one engine haul 12-hour period, hauling nine thousand tons of coal in the train, and the element of distance is the least important element in this transportation cost.

#### *Northwest Coal Consumers Oppose Higher Differential Rate*

In the presentation of their case to the Commission in Washington, last June, the northern operators argued that they had lost their northwestern markets because of their existing rate advantages, reciting that the differentials of 35 to 50 cents were not adequate to allow them to regain the markets they once controlled.

Southern shippers contend that their northern competitors now possess large freight rate advantages over the southern districts and that it is not within the statutory province of the Interstate Commerce Commission to fix rates or increase rate differentials to permit shippers to regain markets that once they dominated and lost because of strikes, labor disturbances, wage scales and other economic ills.

In the recurring Lake Cargo rate cases frequently heard by the Commission the measure of the rates on the transportation of coal to Lake Erie has not been in contention, except for the purpose of increasing the differentials between the competing districts. In the original Boleau case in 1910 the Commission recited the crux of the famous rate controversy when it said:

"What the Pittsburgh operators are most vitally concerned with is the differential between the rate from their district and the rate from the districts in which their competitors operate."

In support of their present petition asking for greater rate advantages the Pittsburgh operators frankly admit their chief concern is in the amount of the differentials and they are unconcerned whether the Commission adds to their rate advantage by increasing the rates from the southern districts or decreasing

the rates from the northern districts. The fate of the consumers apparently gives little concern to the northern shippers.

This attitude on the part of the northern operators has arrayed against them practically all of the domestic and industrial consumers of coal in Michigan, Wisconsin, Minnesota and the two Dakotas. Traffic organizations, civic and commercial bodies, State Railroad Commissions and other public officials have intervened in opposing a further widening of the differentials. They do not want southern coal excluded from their markets by arbitrary rate differentials. They fear a monopoly of their markets and ask the Commission to maintain competitive conditions.

#### *Former Rate Increase Based on Erroneous Interpretation of Hoch-Smith Resolution*

The 1927 order of the Interstate Commerce Commission increasing the rate advantage of the Pittsburgh district from 25 cents to 45 cents a ton was partially based on an erroneous interpretation of the Hoch-Smith resolution. Under the terms of that resolution the Commission, in the adjustment of the rate structure, believed it was warranted in taking into consideration the conditions that existed in the coal industry in the northern districts. Again in 1928 when the Commission suspended the lower rates voluntarily preferred by the southern carriers, the Hoch-Smith resolution was cited in support of the order.

Some weeks ago, the United States Supreme Court in the California deciduous fruit cases announced that it differed from the Commission in the interpretation of the Hoch-Smith resolution. Before this declaration of the Supreme Court, however, Judge John J. Parker in the Richmond decision had held that the Commission had misinterpreted the terms of the Hoch-Smith resolution. He touched the heart of the rate controversy when he said:

"So far as the general language of the resolution is concerned to the effect that the conditions which prevail in industry should be considered in adjusting freight rates to the end that commodities may freely move, this is no more than a general declaration that freight rates shall be adjusted in such ways as to provide the country an adequate system of transportation, and Congress did not certainly intend by this language to create in the Commission an economic dictatorship over the various sections of the country with power to kill and make alive. If the Commission has the right in a rate adjustment to consider the shift in traffic to a community already paying a higher rate and act upon it as one of the factors in still further widening the rate differential, its power to control the economic development of the country is practically unlimited. We

feel perfectly certain that Congress did not intend to vest such power in the Commission."

#### *Rates Should Be Based on Adequate Return to Carriers*

The southern operators have always contended that the carriers should be permitted to move the southern coals to the consuming markets at rates which provide an adequate return to the carriers. Transportation conditions they have insisted are always the paramount factor in the determination of rates. The bulk of the Lake coal from southern mines is hauled by the Chesapeake & Ohio and Norfolk & Western railways. These two roads are among the most prosperous carriers in the world. More than 80 per cent of their freight revenues are derived from the transportation of coal. In 1929 the Chesapeake & Ohio received a total freight revenue of \$118,000,000, of which \$84,000,000 was earned by the coal traffic. Large advances in the net earnings of these carriers, corresponding to the increase in coal tonnage transported are cited by southern operators to prove the adequacy of the existing rates on the coal traffic.

The industrial depression of the present year that has had a marked effect on industry has very materially decreased the operating revenues of the northern railroads that serve the Pennsylvania and Ohio districts. The two prosperous southern carriers, however, have suffered only slight losses.

The final order of the Commission in the Lake cargo controversy will have nationwide interest. The question of whether the Commission can shift prosperity from one producing district to another under the guise of regulating freight rates will be before that body for final determination. The problem is of such magnitude that two years ago the National Association of Manufacturers, after a thorough study of the questions involved in the Lake Cargo rate cases, declared:

"This new policy of the Interstate Commerce Commission is a serious menace to the railroads, as well as the manufacturer and the consumer. The law of supply and demand is nullified. Aside from the effect such preferential reduction will have on the railroads the policy of keeping in business the unfortunately located or poorly managed industries of the country through penalizing by higher freight rates their more successful competitors will in the long run serve to keep the prices of manufactured articles to the ultimate consumer up.

"It is largely because of the feeling that if this decision is allowed to become a precedent efficient operation in every industry and section may be penalized if competitors lose markets and suffer a depressed condition that the National Association of Manufacturers has expressed opposition to the decision of the Commission."



# How Mexico Is Solving Its Problems

By WALTER PARKER, Economist, Fenner and Beane, New York and New Orleans.

Mexico's progress toward stabilization and broader development, as outlined by Mr. Parker, opens a wider field of opportunity for the South. The nearness of the South to Mexico gives an advantage in lower rates and quicker transportation, and for this reason and others Southern business men should cultivate a market which is likely to have an enormous growth in the future. As Canada to the north of us expanded, our Northern border states benefited. In like manner, the states of the South should benefit from Mexico's expansion. With direct telephone, and water, rail and air lines into the Mexican interior, the South is in a favorable position to develop trade with its neighboring country, so rich in natural resources awaiting adequate development.—Editor MANUFACTURERS RECORD.

FOR several years past Mexico has been making a close study of factors that have contributed to the great prosperity of the United States and has found that one of the most important is the telegraph and telephone system which connects up every city, town and country hamlet, each with the other and all with the world. As a result, every alert business man in the United States may keep himself fully posted on business trends and developments.

On the other hand, all Latin America, Mexico included, has had to depend on slow communication. Even in Mexico City, stock market and money changes in the great centers of New York, London and Paris have not been known to business men until the next day and even then only in a limited way.

To meet this and other needs, President Rubio, by executive order has prohibited the assessment of federal, state and local taxes against telephone lines, the object being to encourage extension of telephone and telegraph service in a large way.

IN the creating of a national highway system, including a main trunk highway north and south from the United States border to Guatemala, and east and west from the Gulf of Mexico to the Pacific, Mexico senses the development of a nationwide economic urge of the first magnitude. Obviously, the attraction of motor car tourists from the United States is an objective. But the All-America Highway, which crosses Mexico, will also serve as a main thoroughfare from which many other highways will radiate, thus giving access to many nature-favored spots. Eventually resort hotels will be built in regions where it is never hot and never cold. The east and west highway will be the shortest North American route and is expected to draw a heavy traffic. All Latin America is reflecting increasing enterprise in highway building. Mexico has been at work on this program for several years and has made marked progress.

THERE has been some very wide difference of opinion in the past as to what constitutes fair play for outside enterprise and investment in Mexico. Concessionaires, in some cases, have felt

## Some Major Objectives

*A nationwide network of telephone and telegraph wires providing instant intracom-munication between all parts of the country, and intercommunication between Mexico and the United States and other countries.*

*A nationwide network of all-the-year highways to connect up the several states, and the whole with the United States to the north and Central America to the south.*

*An influx of outside capital and enterprise which while enjoying protection and profitable opportunity will not unduly exploit the resources and people of Mexico.*

*National debt reduction.*

*Education, particularly in gainful pursuits, for the masses.*

*Control of alcoholic liquors through education, high taxes, limited permits and the like.*

*The attraction of tourists, particularly from the United States.*

they should have a free course. On the other hand, the Government has felt that natural resources of Mexico should yield a larger return to Mexico and its people. Conflict and disagreement have naturally been the result. In endeavoring to improve its position, the Government more than once has been accused of attempts at confiscation, while more than once concessionaires have sought advantages the Government would not tolerate. Time and experience are improving matters generally. The Government now clearly recognizes the value to the country of outside capital and enterprise, and outside investors and men of enterprise now clearly recognize the right of Mexico to safeguard

its national welfare in every wholesome way.

Mutual understanding is resulting and in the end the development of Mexico's vast resources will profit all concerned.

ONLY recently an agreement was reached between representatives of the Mexican Government and Mexico's creditors which promises an amicable adjustment of a long-standing and irritating situation. Under the arrangement, which doubtless will be approved, liquidation of Mexico's old obligations becomes feasible, and this should open the way for greater accord and also for internal improvements.

DURING four hundred years there were practically no educational facilities available to the masses in Mexico. Under the old system the masses were merely beasts of burden, mostly carriers of water and wood.

The revolution opened the door of hope to these fourteen or fifteen million people. In very recent years the Government has provided several thousand rural schools where modern agriculture is taught and training in useful trades is available. Even the Indians in remote places are now taught profitable occupations and this means that a new and larger earning and buying power among millions of people will result. Under the new land laws, the peon may acquire land and own his home.

MEXICO had a liquor problem before the United States of America declared their independence, and Mexico watched the progress of prohibition laws in the United States with great interest and learned from the experience of the United States what not to do.

It has avoided prohibition. Instead, it has set up a program of education regarding the evil consequences of excessive use of alcohol and this program is being carried out in all the schools of Mexico.

It has severely limited the number of places where distilled alcoholic beverages may be purchased.

It is discouraging the manufacture of pulque.

Many of its leading officials are openly



practicing temperance as a good example to the people.

THE last unsuccessful revolution seems to have greatly strengthened the Mexican Government and cleared the way for carrying out its policies for the country's development. Many exiles in the United States have signified their desire to cooperate and are now being

permitted to return to their own country.

Clearly, Mexico is making constructive progress. It desires peace, accord, and profitable reciprocal trade with the people of the United States. The very least the people of the United States can do is to lend a helping hand and a friendly cooperation. And more and more that is what they are doing.

### \$5,250,000 North Carolina Notes

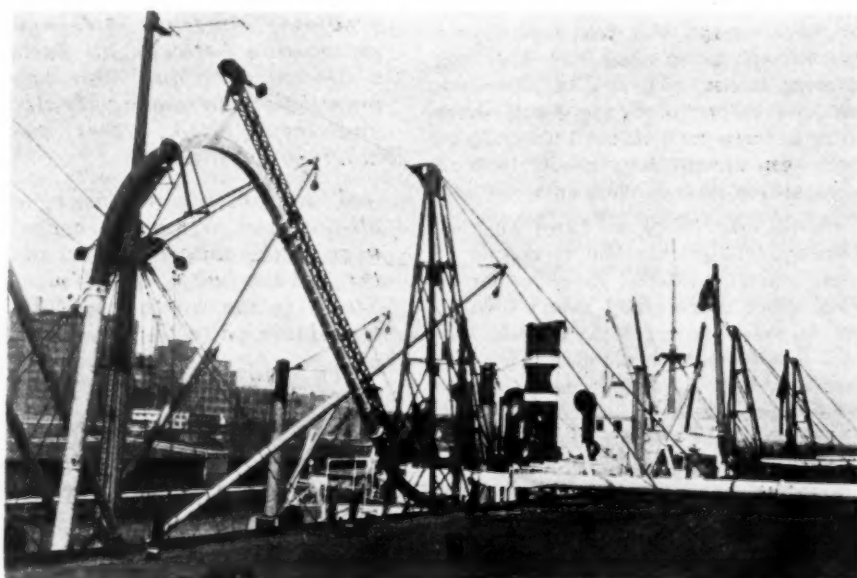
Raleigh, N. C.—Anticipation notes maturing in six months in the amount of \$5,250,000 have been sold by the State of North Carolina, Captain Nathan O'Berry, state treasurer, to C. D. Barney & Co., New York. The notes will bear an interest rate of 2.46 per cent.

## Pneumatic Unloading Device for Copra

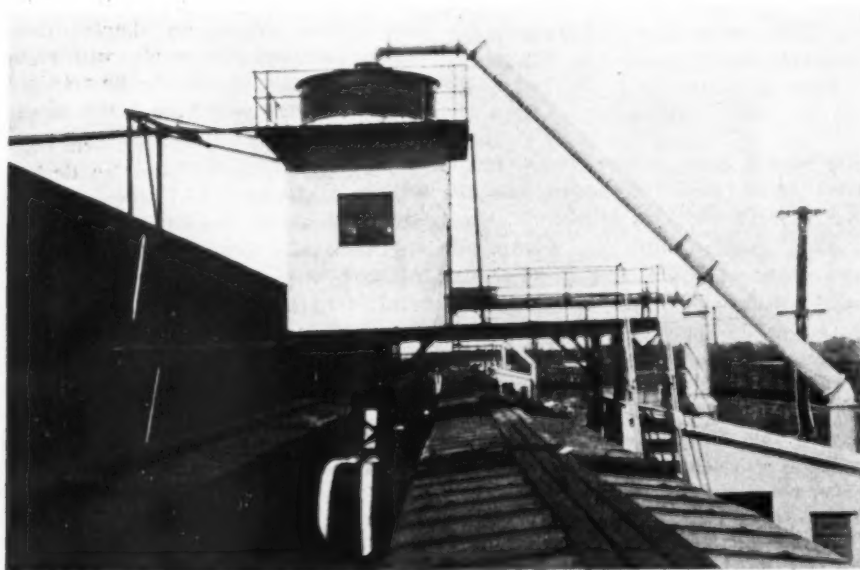
### Speeds Discharge of Cargoes at New Orleans

A double unit, electrically driven, pneumatic conveyor for unloading copra from ships into cars was placed in service recently by the Southern Railway System at the Chalmette docks of the New Orleans Terminal Co., below New Orleans. Formerly copra was unloaded by hand, a slow and expensive operation; first a huge bucket was lowered into the hold and filled by hand-shovel methods, then hoisted to an elevated hopper on the wharf. From a trap at the bottom of the hopper the material was discharged into a hand car, which when filled was run across the dock to a box car, the copra was shoveled into the car by hand and tramped to pack it.

The new facility consists of two complete conveyor units, making it possible to work two hatches simultaneously and load into four cars at the rate of 100 tons an hour. Each unit comprises an electrically driven blower, elevated receiving hopper, and necessary pipe connections. A 14-inch pipe line leads from blower to receiving hopper, thence to a



A steamship discharging copra at Chalmette Dock, the flexible conveyor being shown extending into the hold. Conveyor boom and tower are a part of the unloading facility. A second conveyor and auxiliary tower are shown in the background.



Hopper from which copra is discharged into freight cars, with blower house at right.

tower which rises above the ship. From the tower a 12-inch flexible pipe descends into the hold of the vessel. From a trap at the bottom of the elevated hopper the material is blown through two 8-inch flexible pipe lines into box cars. An auxiliary pipe line and tower leading from one of the elevated hoppers makes possible the working of a third hatch without shifting the vessel.

The equipment stows the copra in the car evenly and the force with which it is blown in packs it compactly, loading approximately 20,000 pounds additional over former hand-loading operations.

Copra is the meat of the coconut. It contains the coconut oil and is used principally in the manufacture of soaps. There is a heavy movement of this commodity from the Philippine Islands to New Orleans through the Panama Canal.

The new device was installed by the Holly Pneumatic Systems, Inc., engineers and manufacturers of New York.

# Tree Planting in Southern National Forests

By L. S. Gross, Forest Service, United States Department of Agriculture, Washington.

**S**TUDY of the planting job in the national forests of the Eastern Region reveals an aggregate of more than 200,000 acres of land once productive, but now devoid of timber growth. This Eastern Region is an administrative unit set up by the Forest Service and includes 16 national forests dotted over eastern, southern and central United States, from Maine to Florida, and west as far as Arkansas, but excluding the Lake States.

Most of this denuded national forest land is on the watersheds of navigable streams and should be growing timber to aid in the control of run-off. All of it is capable of producing timber crops, but will not do so within any reasonable time unless it is planted.

Within the Eastern Region are three recognized divisions, each with distinct reforestation problems:

1—New England, Pennsylvania and West Virginia, where the job is largely planting extensive burns, often in rugged country. Spruce is the chief species adapted to these areas.

2—The Southern Appalachians, where the job is largely that of planting areas of mountain land, formerly under cultivation, and subject to serious erosion and deterioration. Hardwoods, yellow pines and some white pine will be used. Fortunately, over most of this territory, wild currents and gooseberries (ribes), which spread the white pine blister rust, grow in a higher altitudinal zone than white pine, thus permitting the use of this valuable tree without the fear of future expensive control measures.

3—The Southern pine region, where areas to be planted are those denuded by logging and fire, as well as some worn out cultivated lands, especially in Arkansas. In general, longleaf, slash and loblolly pines will be planted in the Gulf States and shortleaf pine in Arkansas.

As early as 1910, direct seeding and also the planting of nursery-grown stock was attempted on an experimental basis, but without encouraging results. Since 1911, the system of purchased national forests has been built up, and the area of land needing planting has steadily increased, although to December 31, 1929, only 1557 acres had been planted.

One of the outstanding planting jobs is the reforestation of a large area of cut-over and burned land in the spruce type of West Virginia, now within the Monongahela National Forest. This type contained originally the largest solid body of red spruce south of the Adiron-

dacks. Stands were heavy, often totaling as much as 40,000 to 50,000 board feet per acre, and in quality the timber compared favorably with any spruce in the East. Logged destructively since 1875, and most of it repeatedly burned, the 40,000-acre sample in the Monongahela National Forest presents today a deplorable picture of forest devastation.

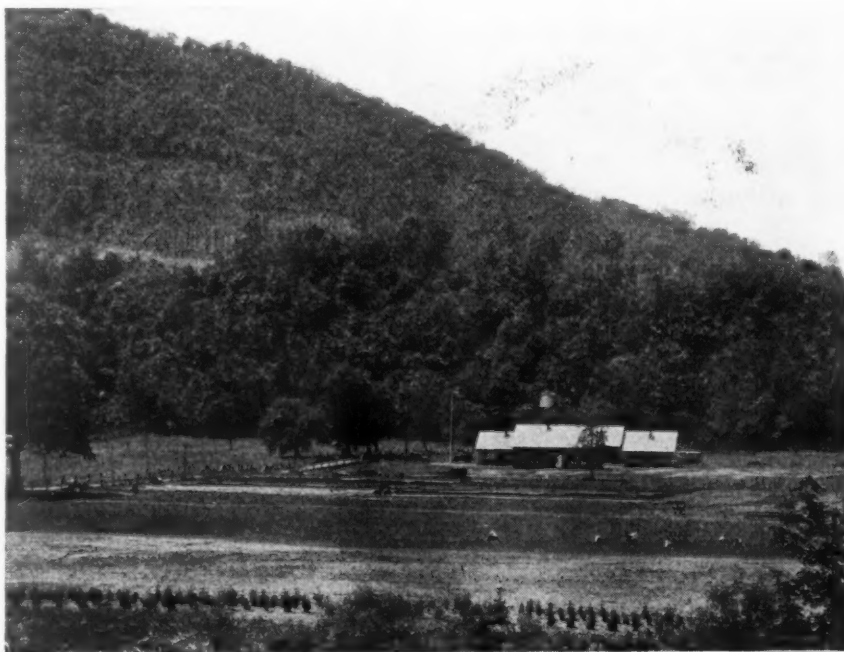
On the Unaka and Pisgah National Forests, in Tennessee and North Carolina, are additional areas of the same character of land, also needing planting. Elevations of the Southern Appalachian spruce type range from 3000 feet in West Virginia to nearly 7000 feet in North Carolina. If such areas are not planted, they gradually choke up with such worthless species as pin cherry, aspen and mountain ash, together with low value hardwoods such as red maple and yellow birch, for the best hardwoods are produced at lower elevations. This land, which once produced 30,000 board feet or more to the acre, should not lie idle or only raise a poor stand of low value species.

Parsons Nursery, located at Parsons in Tucker county, West Virginia, was established by the United States Forest Service in 1928, with the primary purpose of raising red spruce transplants for planting on these thousands of denuded acres. The area chosen is on a fertile bottom along the Black Fork, and the nursery tract includes a total of 28 acres. The present capacity is about

2,000,000 trees per year, but its potential capacity is much greater, and it is planned to enlarge it as funds become available. Planting stock is raised here for a group of forests, including the Monongahela, the Allegheny in Pennsylvania, and the Shenandoah, Natural Bridge, Unaka and Pisgah in the Southern Appalachians.

The very foundation of success in nursery and planting work is seed collection. In this country, far too little attention has been given to source of seed. Studies abroad, particularly in Sweden, have shown conclusively that success in planting is very closely associated with source of seed. The chief crop at Parsons Nursery is red spruce, and it is recognized that it is essential to secure seed from stands growing under climatic conditions closely approximating those on the areas to be planted. The West Virginia spruce type has been so largely devastated by cutting and fire that the procurement of sufficient quantities of local seed is a serious problem.

Comparative meteorological studies, as a basis for the possible successful use of seed from other red spruce regions, are needed. As a start along this line, an empirical study is being undertaken, comparing observations of plant growth on Monongahela planting sites with similar data from the spruce type on Mount Mitchell on the Pisgah National Forest. If trees and plants are found



General View of Parsons Nursery in Parsons, Tucker County, West Virginia





Typical Area of Long Leaf Pine Land in Choctawhatchee National Forest in Florida

This district has been cut over and burned and must be planted if it is again to become productive.

to leaf, flower and fruit at about the same time on each area, it is probable that climatic conditions are sufficiently similar on the two areas so that seed from one may be safely used for planting on the other.

Conditions in the two other national forests included in the northern division of our planting job are somewhat analogous to the Monongahela.

In the Southern Appalachians division, most of the area to be planted consists of abandoned fields, scattered over the mountainous forests. In some cases, such fields have seed trees located favorably, and will restock naturally to more or less satisfactory stands, but most of them will become fully productive in a reasonably short period only if they are planted by man. Planting stock for these areas will be grown at Parsons Nursery.

The forests in the Southern pine region also present serious planting problems. One of the most serious is that of establishing longleaf pine stands by planting on deep sterile sands on the

Ocala and Choctawhatchee National Forests in Florida. A small experimental nursery was established in 1927 at Lake Bryant on the Ocala, and the Southern Forest Experiment Station is studying the problem at another small experimental nursery at Camp Pinchot on the Choctawhatchee. Both these projects are comparatively new, and it will probably be several years before definite results are secured. Elsewhere in the South, planting and nursery work are on a somewhat sounder foundation, due to work already done. In the process of building up the Southern national forests, it is inevitable that the Eastern Region's planting program will be increased by the acquisition of additional areas of denuded land.

On the Ozark National Forest in north central Arkansas, each year, numerous small areas of abandoned and worn out mountain farm lands are acquired. Like the old fields in the Appalachians, these areas should be planted to bring them quickly into productivity. This forest, since its creation in 1907, has been noted

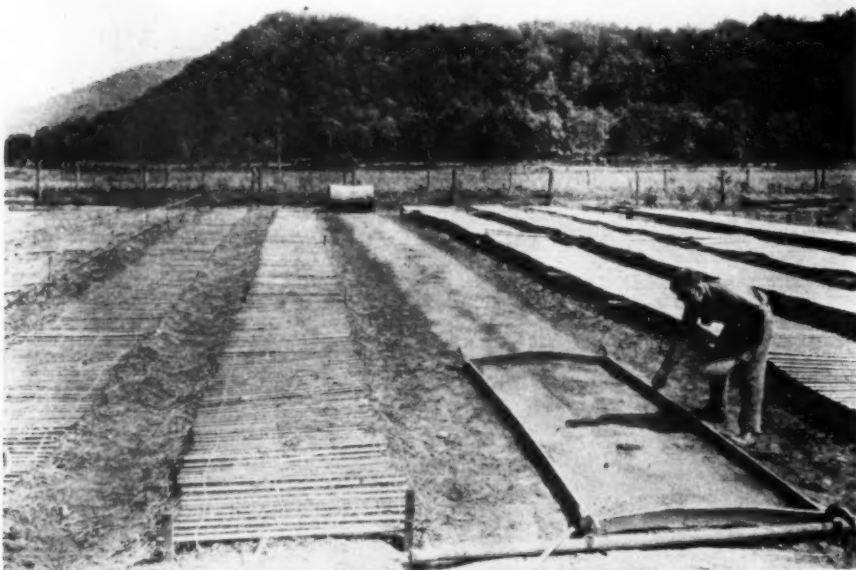
for its large number of incendiary fires, and has suffered untold fire losses. As a part of the campaign to eliminate such fires, it is very desirable that every acre be put to work growing timber. If the Government does not make a serious effort to utilize these lands which are no longer of value for the production of agricultural crops, it will be difficult, if not impossible, to convince the local population that such lands or even timbered lands are worth protecting from fire.

Shortleaf pine will grow well on such lands, and will be the chief species planted. Through the admirable cooperation of the Arkansas Polytechnic College, a small area of the college farm near Russellville is being used for a nursery. A modest start is here being made on the reforestation program by raising 200,000 shortleaf pine seedlings annually. This amount of stock will be sufficient to plant approximately 300 acres a year.

The large planting problem in the National forests of the East and South, totaling according to best present estimates more than 200,000 acres, is increasing each year through acquisition. At the present rate, there will be planted not more than an average of 2000 acres a year, which means that it will be something like 100 years before the land which is at present known to be plantable is planted. Unquestionably, the work will have to be speeded up if these barren acres are to serve a useful purpose in timber-growing and watershed protection.

#### Gravel Mining Development

Columbia, S. C.—The Carolina Gravel Corporation, with offices in the Carolina Life Building here, has incorporated to develop gravel mines in South Carolina, having holdings at Horatio, Hagood and Cayce. The company will begin the construction of a plant within 10 days. Officers include G. E. Walker, president; Clarence Richards treasurer, and Z. C. DeBerry, secretary. C. E. Snyder is the plant superintendent.



Broadcasting Red Spruce Seed by Hand on a Prepared Seedbed of the Parsons Nursery  
Sowing is an important job and is handled entirely by the nurseryman.

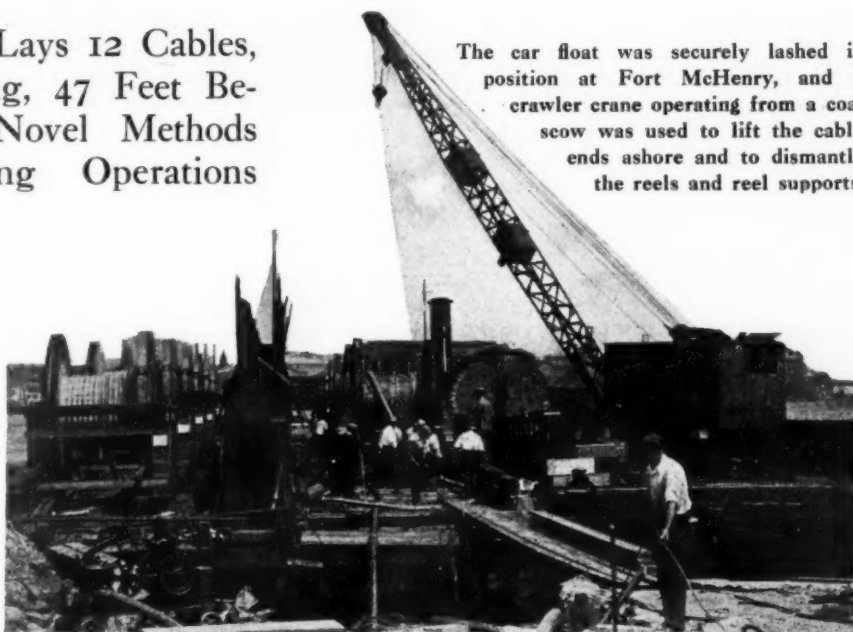


## Unusual Installation of Submarine Power Cables

**Baltimore Company Lays 12 Cables, Each 2200 Feet Long, 47 Feet Below Water Level—Novel Methods Employed in Laying Operations**

An installation of submarine electrical transmission cables under Baltimore harbor was completed recently by the Consolidated Gas, Electric Light & Power Company. The cables form an important link in the company's system providing for interconnection of its generating plants and the various industrial districts of the city, and the method of laying involved some features of special interest.

A total of 12 cables, extending from



The car float was securely lashed in position at Fort McHenry, and a crawler crane operating from a coal scow was used to lift the cable ends ashore and to dismantle the reels and reel supports.

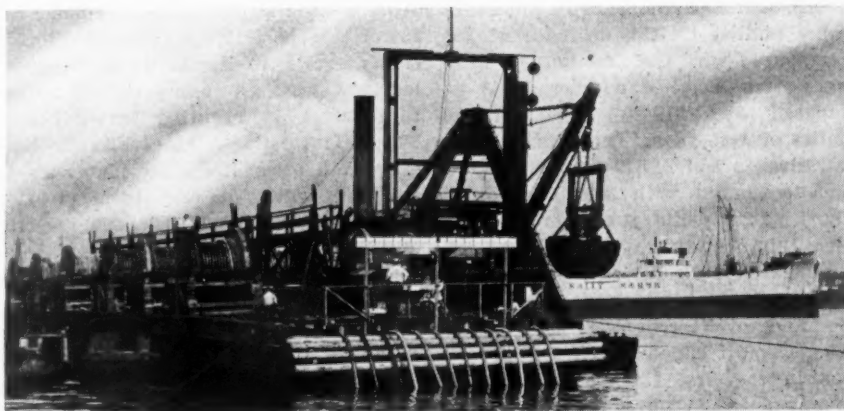


Trainload of Submarine Cables for Baltimore Installation

Fort McHenry to Lazaretto, were laid under the entrance to the northwest branch of the harbor. Each cable was in a single piece about 2200 feet long and consisted of three 350,000 circular mil conductors completely insulated, sheathed with lead, and armored with heavy gauge galvanized steel wire, making up a total diameter of 4 inches. The cables were built for operation at 35,000 volts and each is capable of transmitting approximately 17,000 horsepower of electric energy. In line with the company's policy of anticipating needs, the necessity for nine of these cables can be definitely foretold, but 12 were installed in order to provide adequately for requirements which may arise in the future.

Before laying the cables it was necessary to dredge about 100,000 cubic yards of material from the bottom of the harbor to form a trench 30 feet wide and 47 feet below the water level. Cables were laid two feet apart on the bottom of this trench, and plans are now in progress for covering with a backfill. When this work is completed the cables will be under seven feet of material, protecting them from the anchors of ships which travel in the channel above.

An outstanding feature of this undertaking was the large number of cables placed in a single operation and the extreme lengths and weights of individual cables. Previously, three similar cables were laid across the middle branch of



Dredge Pulling Car Float Across the Stream

Cables were permitted to trail off the stern into the trench. Brakes on the individual reels were applied to maintain proper tension.

the Patapsco River, and the experience gained then proved valuable in arranging the reel mounting, brakes and signalling systems for the job just finished. The Lazaretto crossing was made more difficult, also, because of deeper water and the necessity for keeping a clear passage for heavy harbor traffic.

The installation was effected on a Sunday, with a "fleet" consisting of car float for carrying cable reels, dredge with hauling engines, two steam tugs for warning harbor traffic, one tug for shifting anchors, one launch and tender for a diver, and one launch for messenger service.



At each cable-landing, engineers observed every movement through their instruments and indicated locations by means of signals painted on placards.

## RAILROADS EXPEND \$468,000,000 IN SIX MONTHS

Figures Show Big Increase Over Similar Period in 1929

Washington, D. C.—Class 1 railroads made a capital expenditure of \$468,305,000 for new equipment, additions and betterments to railway property during the first six months of 1930, according to a report submitted to the Advisory Committee of the Association of Railway Executives, by R. H. Aishton, chairman of the executive committee of the Association. These figures show an increase of \$118,000,000 as compared with expenditures for the corresponding period of 1929, and this in face of the fact that railway traffic so far in 1930 has been less than in any corresponding period since 1924 and earnings have been greatly reduced, the rate of return being 3.61 per cent on property investment compared with 5.52 per cent for the first six months last year. Of total expenditures this year, \$187,486,000 was expended for new equipment and \$280,819,000 for roadway and structures.

In the first six months of this year, the railroads installed 49,208 freight train cars, an increase of 16,414 cars compared with the corresponding period in 1929, while passenger cars placed in service totaled 1009, a decrease of 551 as compared with the first half of 1929. Locomotives installed numbered 411 as compared with 319 for the first six months of last year. On July 1, 1930, the railroads had 24,649 freight cars on order, compared with 39,638 on order July 1, 1929, while passenger cars on order July 1 of this year numbered 587 as compared with 740 on order July 1, 1929, and new locomotives on order amounted to 364 compared with 386 in 1929. Capital expenditures for locomotives in the first six months of 1930 amounted to \$49,251,000; for freight cars, \$116,012,000, and for passenger cars, \$21,663,000. For additional main track, yards and sidings, capital expen-

ditures amounted to \$52,634,000; heavier rail, \$28,933,000; shops and engine houses and tools, \$15,888,000; station facilities and office buildings, \$47,641,000; bridges, trestles and culverts, \$28,975,000; additional ballast, \$6,151,000; signals, interlockers, telephone and telegraph lines, train control, etc., \$20,023,000, and for all other improvements, \$80,574,000.

## Foundation for \$3,000,000

### Building

Oklahoma City, Okla.—Contract for the foundation of the proposed \$3,000,000 bank and office building to be erected here for the First National Bank & Trust Co. has been awarded to the Raymond Concrete Pile Co., New York, and the Manhattan Construction Co., Muskogee, Okla. The structure will be 140 by 200 feet, 32 stories and basement, of brick, stone, steel and reinforced concrete. Weary & Alford, Chicago, Ill., are the architects.

## Quick Delivery of Florida Fruits

Tampa, Fla.—A movement started last year by the Florida Citrus Exchange for faster transportation service for Florida citrus fruits to northern and eastern markets promises to become an important factor in assuring better prices. The Atlantic Coast Line, Florida East Coast and associated lines plan soon to put into effect a fast transportation schedule to St. Louis, Chicago and the Mid-West which will be 24 hours quicker than the old schedule and will enable Florida fruit to reach Chicago a day ahead of California fruit shipped the same day. It is estimated that 2500 carloads of Florida fruit went to Chicago auctions last year and an increase of 25 per cent is expected this year. Faster schedules to New York, effective about the same time, have also been arranged.

## \$9,000,000 IMPROVEMENTS PROPOSED

Oklahoma City Committee Recommends Municipal Program

Oklahoma City, Okla.—A program of municipal improvements, as outlined by a special committee, will involve an expenditure of \$9,390,000, for which a bond election will probably be called. A tentative list of improvements planned includes the following items: Waterworks, \$1,153,000; main storm sewers, \$1,250,000; sewage disposal plant, \$1,050,000; main sanitary sewers \$150,000; Central Avenue viaduct, \$775,000; Walker Avenue viaduct, \$410,000; Dewey Avenue widening, \$290,000; diagonal boulevard to capitol, \$140,000; convention hall, \$1,500,000; Fair Park improvements, \$675,000; comfort station \$60,000; city detention hospital, \$250,000; purchase of park property, \$500,000; fire stations and equipment, \$878,000; municipal repair shop, \$250,000, and police signal system \$59,000. The committee consists of Charles M. Dunning, Dr. G. A. Nichols, A. O. Campbell, John A. Brown, Walter C. Dean, E. K. Gaylor, F. P. Johnson, Carl C. Magee, J. E. Owen, J. M. Owen and R. M. Rainey.

## Gas Exposition at Mississippi Fair

Jackson, Miss.—Commissioners of the Mississippi State Fair will hold the first annual Mississippi Natural Gas Exposition in Jackson October 13 to 18 in conjunction with the state fair. The exposition will present to visitors a cross-section of activities of drillers in and near Jackson, where more than a dozen new wells are producing. Activities in the Jackson field, locations of derricks and producers, known land structures and other important facts of the Jackson field will be shown in interesting displays. Mayor Scott, R. M. Taylor and Gus Hawkins, commissioners, point out that in inaugurating the natural gas exposition they are following the announced purpose of the state fair to broaden interest in Mississippi's resources.

## Crystal City Pipeline Begun

Crystal City, Tex.—Construction of a main pipeline from the Zavalla gas field to Crystal City and the Winter Garden section of Texas has been started by the Texas Gas Utilities Company, a subsidiary of the Appalachian Gas Corp., New York. The line will provide natural gas for supplying power to pump water on irrigated farms in the district and is expected to stimulate farming and trucking activities.



## LETTERS FROM OUR READERS

### For Aggressive Business Leadership

The National Bank of Commerce.  
Houston, Texas.

#### Editor Manufacturers Record:

Your issue of September 4 is so full of worthwhile material that it is hard to decide which is the most important article, but I ask your permission to reprint in the Houston Chronicle the article on page 51 by C. D. Gray of Gastonia, N. C., entitled, "An Indictment of Business Leadership."

Undoubtedly, the many stories on the drought, the strikes, the unemployment situation and the cutting of wages have created an area of pessimistic thinking which covers a large portion of the United States. Never was there a time when faith in the future of this country and courageous leadership were more necessary, and Mr. Gray's article should be read by every business man in the country.

I am reminded of Stonewall Jackson, who, when his lines were at a standstill and melting under the Federal fire, told his commanders, "Now is the time to attack"—and attack he did, with such fury that an interesting story was written for history. It would seem to me that now is the time to increase output in every direction and sell that output; continue paying the American standard of wages, which of its own account will create new markets for American products and in that way bring about the prosperity of which everyone is dreaming, but which, apparently, no one is doing anything about.

A. D. SIMPSON, Vice-President.

### Promoting Atlantic-Mississippi Barge Canal

Florida State Canal Commission,  
Tallahassee, Fla.

#### Editor Manufacturers Record:

The Southeast is coming into its own through highway improvement and the building of inland waterways to connect natural waterways to furnish barge routes to all the States along the Atlantic and Gulf coasts and into the Mississippi and Ohio valleys.

The Atlantic-Mississippi barge canal project, from Cumberland Sound via St. George's Sound, which the State is promoting through the Florida State Canal Commission at Tallahassee will connect the Atlantic Intracoastal Waterway and the Mississippi River, and will materialize the dream of a continuous barge route "from Cape Cod to the Rio Grande," as the Texas-Louisiana Intracoastal Canal will traverse the section from New Orleans west to the Rio Grande. The Gulf Intracoastal Waterway has been approved for construction as far east as Pensacola. Under authority of the Rivers and Harbors acts of 1927 and 1930, a special board of engineers appointed by the Chief of Engineers is now surveying the proposed route for the project. All feasible barge routes will be surveyed and the best chosen, to facilitate rapid interchange

of commerce between eastern and western States. The Mississippi Valley Association is supporting the project, as it will be their way to the eastern States; and for the same reason, the Texas-Louisiana Intracoastal Canal Association is giving the Commission effective support. With this link completed, the Government can extend its barge service to all Atlantic States, and carry commerce to the Mississippi and Ohio valleys and contiguous territory, thus directly benefiting more than 30 States.

The War Department has honored the South by appointing engineers of high ability to the district offices, and Lt. Col. Mark Brooke, gulf division engineer, has signally served his country in the Panama Canal matter, in France and at home. He is senior member or chairman of the special board having charge of the project. It is plain that men of vision in Washington realize that prosperity of the Nation rests on the prosperity of all the Southern States, and that prosperity of the South depends on adequate development of waterways, a completely connected system for barge transportation.

After expending so many millions on waterways, it is believed certain the Government will build the short canals necessary to carry the Gulf Intracoastal Canal from Pensacola east to Fernandina on Cumberland Sound, utilizing the several natural waterways along this route, to save both time and cost of construction. With large industries at Pensacola, Perry, and throughout the naval stores territory and the new kraft paper mill and docks at Panama City, it is reasonable to expect with a barge route from this territory that many more industries will locate along the route of this waterway, as there is an unlimited amount of electrical power available and climate and general living conditions are excellent.

For many years, the South has been indebted to your newspaper for consistent support of all progressive movements. This interest and support have given the Southern cities publicity of great value, and doubtless has influenced the locating of various industries where local conditions offered desired advantages and good transportation facilities. Your continued assistance will be appreciated by all who have the welfare of the South at heart.

F. R. S. PHILLIPS,  
Member, and Secretary.

### The Soviet Establish an Office in California

Los Angeles County Unit  
Better American Federation  
of California.

Los Angeles, Cal.

#### Editor Manufacturers Record:

Your recent front page editorial and the leading editorial article are both so splendid that I am asking for another copy to place with the officials of the Los Angeles Chamber of Commerce.

This spring, a representative of Amtorg, the vice-president, in fact,

visited in Los Angeles and succeeded in making certain desired connections. They have now established an office, which they claim will handle their California orders and are making constant advances to the Chamber of Commerce and Los Angeles business men. The last bulletin of the Los Angeles Chamber of Commerce contained an announcement of the establishment of the Amtorg headquarters here.

MARGARET A. KERR,  
Secretary-Manager.

### South's Greatest Period of Growth Ahead

Montgomery & Buchanan,

Laurel, Miss.

#### Editor Manufacturers Record:

The information concerning the South and the advertisement of its resources which you are giving appear to me as a real service, both to the people of the South, and the investing public. The great period of rapid growth lies just ahead.

In our immediate section, the rapid development of hydro-electric power has given us an abundance of cheap power, and within the next few weeks natural gas will be furnished our city, along with other cities in this section of Mississippi. This will add cheap fuel to cheap power. We already have an abundance of raw materials, including various minerals, lime, fire clay, and large quantities of both hardwood and pine. The fertile lands and long growing seasons make it easy to furnish cotton, grasses, and cane which may be used in various ways in the manufacture of useful and ornamental articles.

GOODE MONTGOMERY.

### Foreign Student Studies the South

Baltimore, Md.

#### Editor Manufacturers Record:

I am a Swiss exchange student in economics at Johns Hopkins University. I was particularly interested in the industries of Baltimore and also in the industrial developments of the South. I read your weekly magazine with the foremost interest regularly and I can assure you it was of very great help to me in my studies.

I would be very much obliged to you if you would send me the two recent numbers I have designated, as I shall leave very soon for Switzerland.

FRED Y. ZWICKY.

[The MANUFACTURERS RECORD, and its annual publication—the Blue Book of Southern Progress—are of value to every high school and college student in the United States, particularly to those of the Southern States. The information given in these publications, which deals with Southern resources, development and opportunities, should be available to every high school and college student in the South.—Editor MANUFACTURERS RECORD.]



# IRON, STEEL AND METAL MARKET

## A Modest Increase in Demand for Steel

Pittsburgh, September 29.—[Special]—The sum total of steel demand has continued to increase, though in no large way. Demand is now at a rate probably sufficient to support a steel producing rate of about 65 per cent this week, with chances of further increase during the next few weeks. Such a rate would represent a tonnage fully 10 per cent above the average rate of production in July and August.

The increase falls short of what would be indicated by predictions made during the duller spell but it is really a substantial increase in view of the fact that it occurs without any assistance from either the railroads or the automobile industry. The railroads are accounting for no more steel than formerly if indeed as much, while the automobile industry continues on the down grade of activity, which is quite seasonal although an upward reaction might have been expected for this time on the ground of light production in July and August.

The rate of steel production may easily have some further increase and the high rate may be 15 per cent or more above the low rate of July. That would be in reasonably close accord with precedents as to seasonal improvement, for never except in an altogether exceptional year, like 1928, has steel production reached as high a rate in the second half as it had in the first half.

As to improvement in general business, or a lessening of the general industrial depression, the steel trade does not see any of that, accounting for all the improvement it is experiencing on purely seasonal grounds. Thus there is a marked increase in demand for sheets by the stove and range industry and the agricultural implement industry is ordering much more steel, starting on its active season making implements for spring distribution and use.

The official report on fabricated structural steel in August shows bookings at 264,000 tons and shipments at 280,000 tons. There was a slight decrease from July, but the general pace of earlier in the year is fully maintained. Bookings in the second four months of the year exceeded the first four months by 10 per cent, which is a little more than average seasonal change in previous years. In the eight months, shipments of the shops were only 3 per cent under last year while they were above other years. Fabricated structural steel and line pipe, chiefly for gas lines, are by far the best sustained activities this year.

Steel producers continued to report finding a better feeling among their customers, a larger appraisal of their prospective steel requirements. No one counts on any large revival within the discernible future. The first point would be one at which the depression would cease getting worse, and that point is believed to have been passed recently, though it is held that whatever improvement is found in any activity is purely seasonal in character. The inference is that steel production will taper off later in the year from whatever rate it attains meanwhile.

Some progress has been made by sellers of bars, shapes, plates, sheets and strips in their effort inaugurated a few weeks ago to stiffen up their respective markets. Concessions from 1.65c on bars are now regarded as uncommon or exceptional, while 1.65c is being quoted on small lots of plates and shapes, 1.60c being considered the inside price, while for some time 1.60c was frequently shaded. Sheets are fairly steady at 2.45c for black, 3.00c for galvanized and 2.00c for blue annealed, 10 gauge. Automobile sheets are purely nominal at 3.60c, with not enough business going to develop what the real price would be. Standard pipe is reported quite steady.

The annual rail buying movement is opened with an order by the Delaware & Hudson for 12,870 tons. The large lines have not indicated what tonnages they will buy but it is generally expected the movement will be considerably lighter than for several years.

## Metals in General Maintain Steadiness

New York, September 29.—[Special]—The major metals have been fairly steady in price during the past week, and in some cases quite active. Tin was an exception, having dipped early in the week to 29¼c per pound which was nearly the bottom price for the past several years, but then coming back sharply the next day to the accustomed level of about 29¾c per pound. Copper became lower at the middle of the week.

The minor metals, however, have not been so steady. Thus quicksilver which has been selling for a long time at around \$117 per flask, has become much weaker, with sales reported as low as \$110. Platinum prices also broke to \$29 per ounce or less, though rallied later to \$35. Silver prices are uniformly the highest in many months, fluctuating between 36¼c and 37c per ounce due to demand from China. Antimony has been

easy, selling around 7½c per pound, duty paid.

Slow improvement in industrial conditions generally is still observed. Steel operations increased another 3 per cent in a week to a general average of around 61 per cent of capacity. In steel the betterment apparently lies in many minor consuming lines rather than among major users, but this style of improvement is often regarded as the healthiest.

Among the statistical situations of the non-ferrous metals, tin exhibits the greatest improvement. The drastic curtailment program of the principal producers of the world, whereby the equivalent of two months' shutdowns were put into effect, is beginning to have weight and will probably make a favorable showing in the September statistics.

The copper market had been stabilized at 10½c per pound for domestic shipment and 10.80c for export, until Thursday, when the domestic quotation lost ¼c to 10¼c. These are the lowest prices since 1896 when the low point was 9¼c per pound. Export sales during the week have averaged 1,000 tons daily, while local business has been very light.

Copper consumers are not certain but that the domestic price may dip to 10 cents. In other words, a fractionless figure has been the stable price ever since the 14-cent level was broken through last spring, the market selling for a time at 13, 12 and 11 cents.

The copper situation is often compared with that in 1921. Surplus stocks now are the largest since that year. In many respects, however, the situation now is better than at that time. Invisible stocks of copper at present are extremely low, this applying both to virgin metal and scrap. In 1921, however, there were enormous quantities of metal left over from the war, much of it hidden.

Again the per capita consumption of the world now is considerably higher than in 1921 because of higher standards of living. Where the most modern inventions are used there is found copper in considerable quantities. Another favorable factor of the present is that scrap copper prices are so low as to make junking unprofitable, hence production of scrap is at a low ebb. Domestic sales over the past week were chiefly for October and November shipment. Many producers turned down business for first quarter of next year on the theory that prices will be higher when that period arrives.

Selling of lead has been spotty in that sales in the East were much better than in the Middle West. Moreover a few producers secured the lion's share of orders. Sales for the week are estimated

at 6,500 tons, the best in two months. Lead prices have been unchanged at 5.35c per pound, East St. Louis, and 5.50c, New York. Cable manufacturers were the best purchasers, while the corrodors were good customers. The least buying response came from the makers of ammunition. Except for a few large tonnages bought, selling was generally in minimum carloads.

Prices of prime western slab zinc were unchanged at 4.25c per pound, East St. Louis. Early in the week considerable activity was said to have developed. Yet, as in lead, this must have been spotty, for many producers reported quiet. It is assumed, too, that if selling had been general higher prices would have resulted, for the zinc market is sensitive these days.

Tin has lost its steadiness of the late summer. Prices were fluctuating erratically between 29¼c and 29¾c, up one day and down the next. Consumers bought quite heavily at the lower levels, on some days taking as much as 300 tons. The statistical situation in tin appears a bit better, yet there are those who still await materially lower prices.

It has been stated recently that employment conditions have improved more in other lines than in the metal trades.

### Pig Iron Unchanged

Birmingham, Ala., September 29—[Special.]—The last quarter of the year will see no change in pig iron market conditions so far as buying is concerned, according to indications now apparent. The melters will buy in small lots and specify for early delivery. The base price for the remainder of the year will remain at \$14, No. 2 foundry. Improved conditions are anticipated by many of the melters but the manner of buying will not be changed, requirements of a few weeks ahead at most will be purchased against.

Two companies report their shipments during the present month as aggregating a little more than production. Total output of blast furnaces in Alabama is lower, two furnaces being shut down and another having fires banked part of the time.

Two companies are announcing both sand cast and machine cast pig iron, customers to have their choice. Surplus stock of foundry iron on furnace yards is considerable, yet under what it was May 30, 1929. Consideration is being given to reconciliation of production and demand. Survey of the melters is fairly encouraging. Cast iron pressure pipe makers are still shipping their product in volume though new lettings are not reported as adding up in tonnage. Stove foundries are ready for the trade. Goslin-Birmingham Manufacturing Corporation

has been shipping heavy sugar machinery in quantity into Mexico, the past four months seeing much work in that line handled here. Shipment of 200 tons of this class of machinery was reported the past week. The disastrous drop in the sugar market, so far as Cuba is concerned brings about loss of hope that that country will be in the market for machinery in the near future. In Mexico several companies were organized during the past few years, one of the larger having as executive a former president of the country. These have been partial to the Birmingham district and placed business here in quantity.

The steel industry has suffered a little setback by the shutting down of rail mill, blooming mill, open hearth furnaces and other portions of the Ensley Works of the Tennessee Coal, Iron & Railroad Company and the closing down of the plant of the Pullman Car & Manufacturing Corporation at Bessemer. The railroads have not placed much if any business for several months and as a consequence those mills and shops which produce the railroad requirements have no other course than to cease operation. Estimate now is that steel operations of the district are at 48 per cent capacity.

Improved demand in both plate and sheet steel is reported and some business is beginning to gather, warranting active production. It is believed that gradual return of activity in these lines will extend to other shapes of steel and that before the end of the year the entire steel structure will be on a firmer foundation. The structural steel fabricating shops are operating on full time and are seeking business throughout the territory with bright prospects. Sixty days limit is given on the shut-down of the rail mill and the Ensley Works. In the meantime such repairs as are necessary will have been installed and when resumption of operations is at hand the production will be improved.

Also, there is no hesitation in the immense construction program in the steel industry of this section.

The coal industry anticipates material improvement during October. Two interests have taken on healthy contracts and will start delivery in the next few weeks. Coke will also pick up a little next month.

#### QUOTATIONS ON PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon. f. o. b. furnaces, \$14.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$14.50; iron of 2.75 to 3.25 per cent silicon, \$15.00; iron of 3.25 to 3.75 per cent silicon, \$15.50.

#### OLD MATERIAL.

Old steel axles .....	\$16.50 to	\$17.50
Old iron axles .....	17.00 to	18.00
Old steel rails .....	11.00 to	12.00
Heavy melting steel .....	10.50 to	12.00
No. 1 cast .....	11.00 to	11.50
Stove plate .....	9.50 to	10.00
N. 1 railroad wrought .....	9.50 to	10.00
Old car wheels .....	10.50 to	11.00
Old tramcar wheels .....	11.00 to	11.50
Machine shop turnings .....	7.00 to	8.00
Cast-iron borings .....	7.00 to	8.00
Cast-iron borings (chem.) .....	12.00 to	13.00
Re-rolling rails .....	12.50 to	13.00

### Contracts for Additional Units of \$8,000,000 Pipeline

Tulsa, Okla.—Additional units of the 1350-mile gasoline pipeline being built by Great Lakes Pipe Line Co. from Ponca City, Okla., to the Great Lakes district, have been let to contract, according to announcement. William Schmidt, Saukville, Wis., was awarded contract for 236 miles of 6-inch line from Des Moines to Minneapolis, and the Natural Gas Engineering Corp., Tulsa, for 180 miles of 8-inch line from Kansas City to Des Moines, including the Missouri River crossing at Kansas City. A six-inch line from Des Moines to the Mississippi River was awarded to the Cater Construction Co., Kansas City, Mo., and a line from the Mississippi River, including the crossing to Chicago, was awarded to the Seybold-Mitchell Construction Co., Houston, Tex. Two units of the line involving a total of 265 miles, between Ponca City and Kansas City, were recently awarded to the Sheehan Construction Co., Tulsa. The Great Lakes Pipe Line Co. is a jointly owned subsidiary of the Barnsdall Corp., Tulsa, and the Continental Oil Co., Ponca City. The cost of the project is, estimated at \$8,000,000.

### \$996,000 Bid on Prettyboy Dam

A low bid of \$996,732 for the construction of the proposed Prettyboy dam on the upper Gunpowder River has been submitted to the Public Improvement Commission, Baltimore, by the J. A. Laporte Corp., Albany, N. Y. The commission will consider the bids in tabulated form before making a recommendation to the Board of Awards. The dam has been designed to impound 20,000,000,000 gallons of water to supplement the city supply, specifications calling for completion in December, 1931. The dam and lake will cost about \$3,500,000, according to estimates. Charles Brown Cornell, Youngstown, Ohio, is the engineer for the project.

### Heating Insulation in Tobacco Plant

All heating insulation for the new cigarette building of the American Tobacco Co., at Richmond, Va., as described recently in the MANUFACTURERS RECORD, was furnished and installed by W. Reid Hayden, Inc., Baltimore. Likewise the entire high and low pressure insulation in the boiler plant was furnished and installed by this company, Johns-Manville materials being used exclusively. It was incorrectly reported that the Virginia Ice Machine Co. had furnished insulation.



# HIGHWAYS AND MOTOR TRANSPORT

## VIRGINIA ADDING TO STATE HIGHWAYS

Hearings Soon Also on Allocation of \$10,000,000 for Road and Bridge Construction

Richmond, Va.—Hearings will soon be held by the State Highway Commission on taking into the state highway system 1587 miles of roads, these to be divided among the various counties according to the area the county bears to the total area of the state, no county to receive less than 8 miles, and counties within whose limits are cities wholly or in part of 50,000 population or more, shall receive not less than 25 miles. After December 1, the commission will announce where 50 per cent of this mileage has been located and will take over for maintenance as of December 31, 1930, one-fourth of the total mileage coming to each county and a second fourth as of July 31, 1931. After December 1, 1932, the commission will announce where the second half of the mileage shall be located in each county and take over for maintenance the third fourth of the total mileage as of December 31, 1932, and the fourth as of July 31, 1933.

The Commission soon will hold hearings also on the allocation of \$10,000,000, which will be available for the construction of roads and bridges in the state during the fiscal year beginning July 1, 1931, and ending June 30, 1932. Amounts allotted to the various districts are as follows: Bristol district, \$1,260,000; Salem, \$1,403,000; Lynchburg, \$1,256,000; Richmond, \$1,466,000; Suffolk, \$1,469,000; Fredericksburg, \$734,000; Culpeper, \$1,132,000, and Staunton, \$1,280,000.

## Has \$400,000 Road Program

Amarillo, Tex.—With a \$200,000 fund available for new paving, which will probably be supplemented by a like sum from the state, Potter County's road problem seems near solution. A tentative program involves as its major units the oil fields highway, paving of highway No. 5 north to the Moore County line, and the paving of route 66 from the Carson County line to Amarillo.

## \$1,000,000 Ferry Road Opened

Chattanooga, Tenn.—The new \$1,000,000 Kelley's Ferry Pike, a 12-mile project extending from Chattanooga to Jasper, has been opened to traffic from the south end of Hale's bar to Chattanooga. According to J. P. Dicus of Dicus Bros.,

Waynesville, N. C., contractors, approximately 500,000 cubic yards of earth and stone were moved. At Hale's bar the highway has an elevation of 1200 feet and crosses the Tennessee River over a \$500,000 bridge. The maximum grade on the entire project is 6 per cent.

## \$3,000,000 Road Projects

### Announced

Columbia, S. C.—Bids will be opened October 8 by the South Carolina Highway Commission, Ben M. Sawyer, chief commissioner, for 16 road and 9 bridge projects, to cost approximately \$3,000,000. Eleven road projects will cover nearly 100 miles of concrete paving, while two projects call for 22,782 miles of sand-clay construction; two for 20,851 miles of grading and one for 6,346 miles of top soil. Bridge construction will involve reinforced concrete, timber and steel.

## Motorists Traveled Average of 6220 Miles

Washington, D. C.—Each motorist in the United States traveled an average of 6220 miles last year, according to the American Motorists Association, with one automobile fatality for each 4,986,415 miles traveled. The total gasoline consumption by automobiles last year was 13,188,070,040 gallons and by computing an average of 12.5 miles to the gallon the total mileage would amount to slightly less than 165 billion miles.

## Automobile Production Drops

Washington, D. C.—Registering the smallest production of any month this year, the Department of Commerce reports the total output of automobiles in the United States during August as 223,046 compared with 263,363 for July and 498,628 for August of 1929.

# Experimenting With Metal Base Highway

By RALPH E. PEARSON, Middletown, Ohio

The world's first metal base highway was completed recently at Springfield, Ill., with many officials of the iron and steel, brick and allied industries, and highway organizations witnessing the experiment, performed under patents held by W. H. Mosely, vice president of the Poston-Springfield Brick Co. The new type road has a carefully rolled and prepared sub-grade on which the Armco iron base and curb are constructed. A mastic sand cushion was placed on this base and then a layer of brick with asphaltic filler poured into the interstices. It is expected that this should result in an indestructible base with a smooth riding surface built into the structure, which is designed with sufficient flexibility to meet all changes in temperature.

Three 50-foot sections comprise the 150-foot section of the road. One of these sections is quarter-inch blue annealed flat sheets and the other two are 10-gauge galvanized and corrugated sheets. The corrugations in one of the latter are parallel to the road and in the other they are transverse. In constructing the blue annealed section, two sheets laid end to end span the highway, expansion and contraction being provided for along the center line where the end of one sheet is laid on the edge of the adjoining one. One of these transverse

edges is turned down to grip the road and the other is supported upon the adjoining section. The end of the plate section at the edge of the highway pavement is turned up to form a retaining wall for the brick or other paving material, also to give rigidity to the sheets.

In the section where the corrugations of the galvanized sheets run parallel to the highway, the other sheet edges are also turned up to retain the brick wearing surface. One edge of each other sheet is turned down to grip the roadway, while the other edge is lapped one corrugation on the adjoining sheet. A T-bar was used under each transverse joint. Where the corrugations run transversely, an ell was welded along the outer edge of the sheet to retain the brick, this being done because of the difficulty experienced in bending sheets against the corrugation. Sheet ends on the center line of the highway were laid on a T-bar, one transverse edge of each sheet being turned down to grip the highway, while the other was lapped on the adjoining section. The sheets were joined by "tack" or "spot" welding on the job.

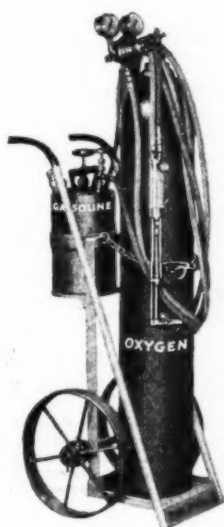
It is believed that such a roadway will not only be flexible but that the new metal base highway offers opportunity for quick sectional repairs if ever needed, or speedy surface repairs.



## NEW AND IMPROVED EQUIPMENT

### Torch for Metal Cutting

Following extensive research and experiments, the Torchweld Equipment Company, Chicago, manufacturers of acetylene and other fuel gas torches, announce a metal cutting torch which uses



Uses Gasoline As Fuel

gasoline and which is said to have passed the most grueling laboratory tests. It utilizes a standard fuel at a comparatively low cost, has great speed and is said to be free from back fires and torch flashing. It consists of a cutting torch with four gasoline cutting tips, 25 feet of high pressure oxygen hose, 25 feet of flexible metallic gasoline hose, 2-gallon welded gasoline tank, high pressure two-gauge oxygen cutting cylinder regulator, wrenches, goggles and gloves. The torch may be used for cutting bolt and rivet heads and slats and openings of all sizes and shapes, while for larger work it may be employed in a cutting machine.

### Durolite Steel Dragline Blocks

A recent development of Sauerman Bros., Inc., Chicago, engineers and manufacturers of cableway excavators and power scrapers, is a Durolite steel dragline block of 6-inch sheave diameter; this line of blocks is now available in sizes ranging from 6 to 42 inches. Placed on the market about 4 years ago in standard sizes of 12 to 30 inches, the development of larger coal-storage and



Opens to Receive Cable



6-Inch Block With Swivel Hook

earth-moving power scraper machines necessitated the addition to the standard sizes of blocks 36 and 42 inches in diameter, and at the other end of the line the small Durolite with 10, 8 and 6-inch sheaves have been developed for special purposes, such as underground excavating where minimum weight is a requirement. The blocks are built of light and tough special heat-treated alloy steels, flange of the sheave being protected by a heavy bead on the housing which protects the cable and eliminates fouling. By removing one pin from the yoke, the blocks may be opened to receive or to remove cables. Lubrication is provided through the sheave. Blocks are furnished with either bronze-bushed or roller bearings and with swivel hook, swivel rope-bearing eye or swivel pin-bearing eye attachments.

### Bay City Shovel With Allis-Chalmers Power Unit

A one-man tractor shovel, designed for high speed operation and powered by an Allis-Chalmers model U tractor, has been developed by Bay City Shovels, Inc., Bay City, Mich. It is recommended for jobs which do not require heavy machines, one feature being economy of operation, made possible by light weight and compact design. A  $\frac{3}{4}$  swing also adds to operating economy. Another feature is ability to work in crowded quarters, as in stone quarries, tunnels

and in manufacturing plants. The unit is mounted on long full crawlers carrying a pressure of only 6 pounds per square inch of ground surface. Its working weight is 10 tons. Of all-steel construction, the gears are machine cut and the shafting of special analysis. Timken and Hyatt roller bearings are used. The machine is convertible from shovel to clamshell dragline, trench hoe or skimmer, one man operating in each case, with propelling speeds up to 4 miles per hour. It is sold and serviced by most of the Allis-Chalmers tractor dealers.



One-Man Tractor Shovel for Operation at High Speed

### National Fire Week Proclaimed

Through proclamation by the President of the United States, the week beginning October 5 has been designated National Fire Prevention Week, and wide observance of the event has been planned throughout the country. The North American Continent, the proclamation says, leads the world in the amount of its annual fire waste, property losses in 1929 having been estimated at \$470,000,000. Thousands of persons die and thousands are injured annually as a result of burns, and 66 per cent of all fire fatalities take place in family homes. The national fire loss for 1929 is an increase of \$9,000,000 over the previous year, and 55 per cent of the fires of known origin are said to have been preventable.

# CONSTRUCTION DEPARTMENT and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

## Airports, Airplane Plants, Etc.

Ala., Birmingham — City will let contract about Nov. 1 for building at airport; plans complete for administration building, hangar and club building. 8-28

Ala., Montgomery — Nashville Bridge Co., foot of Shelby Ave., Nashville, Tenn., reported, low bidder for 175 tons struc. steel for Air Corps Tactical School. 8-21

D. C., Washington — Following cities applied to Dept. of Commerce, Aeronautics Branch, for airports: Orlando, Fla.; Athens, Ga.; Crowley, La.; Brownsville, Tenn.; Covington, Tenn.; Dyersburg, Tenn.; Paris, Tenn.; Ripley, Tenn.; Somerville, Tenn.; Union City, Tenn.; Roanoke, Va.

Fla., Pensacola — Columbia Contracting Co., 401 Broadway, New York, has contract at \$59,442, for boilers, oil burners and flue at Naval Air Station.

Fla., South Jacksonville — War Dept. issued permit to city for filling and bulkheading for airport purpose; Marcel Mazeau, Consult. Engr., 314 Colomao St., made preliminary surveys, estimates and maps and now making preliminary detail drawings for hangar and administration building; 5150 ft. of conc. bulkhead; 2,013,440 c. yds. of hydraulic fill; landing field as designed will be a circular field 2500 ft. in diam., making it an all way field with facilities for sea planes.

Fla., St. Augustine — City will take over and develop airport.

La., Monroe — Ouachita Parish Jury receives bids Oct. 1 for hangar building at Selman airport; plans by Herbert Dickard, Consult. Engr., 404 Bus St., include building 110x40 ft.; brick and steel; cost \$12,000. 9-25

S. C., Camden — Weeks Aircraft Corp., Milwaukee, Wis., reported, leased airport.

Tex., San Antonio — City, C. M. Chambers, Mayor, reported, plans constructing first unit of administration building at Minburn Field.

S. C., Spartanburg — City, D. G. Adams, City Engr., reported, plans airport improvements.

Tex., Duncan Field, San Antonio — Government, Maj. A. W. Robins, Commanding Officer, Duncan Field, has plans in progress for depot shop buildings cost \$400,000; steel construction; struc. clay tile; conc. floors; steel hangars to cost \$100,000; probably call bridge at \$26,000 expenditure.

Tex., Fort Worth — City, O. E. Carr, Mgr., has plans by city engineering department for repair shop, Meachum Field; tile and stucco; 1 story; 78x165 ft.; Texas Aero Corp., Temple, Lessee.

Va., Quantico — Bureau of Yards and Docks, Navy Dept., Washington, D. C., receives bids Oct. 8 for dismantling and re-erecting 3 steel frame hangars, each 66x140 ft.; dismantling and storing 1 steel frame hangar and two 100 ft. radio towers and erecting 60x110 ft. extension to an existing hangar at Quantico.

## Bridges, Culverts and Viaducts

### Proposed Construction

D. C., Washington — See Roads, Streets, Paving.

Florida — State Road Dept. receives bids for 3 bridges. See Roads, Streets, Paving.

Fla., Melbourne — State Road Dept., B. M. Duncan, Ch. Engr., Tallahassee, has plans approved by War Dept., Washington, for bridge over Crane Creek to replace existing bridge.

Fla., Jacksonville — Duval County Comms., Jacksonville, and Nassau County Comms., Fernandina, plan building timber bridge over Thomas Creek, Lem Turner road, to replace present bridge; Earle P. Luce, Duval County Engr.

Fla., Palatka — Putnam County Bd. of Bond Trustees plan replacing 46 wooden bridges with conc. structures, involving \$69,000; 2, Brown's Landing road; 2, Johnson and Orange Springs Highway; 1, between Melrose and Putnam Hall; 4, Federal Point road; 1, Silver Lake road; 3, Fruitland to Crescent City road; 11, Welaka to Fruitland road; 5, road, Fruitland to Georgetown; 3, road, East Palatka to Esperanto; 6, road, Bostwick to Palmetto Bluff; 3, St. Johns road; 4, Spring-side road to Dave Futch's Corner; 1, Peniel road; start work at once with local labor.

Ky., Forks of Elkhorn — State Highway Comsn., H. D. Palmore, Engr., Frankfort, ordered replacing covered bridge with new bridge at \$26,000 expenditure.

Ky., West Liberty — State Highway Comsn., H. D. Palmore, Engr., Frankfort, has application approved for bridge over Licking River. 9-4

La., Baton Rouge — Missouri Pacific R. R. Co., E. A. Hadley, Ch. Engr., St. Louis, Mo., New Orleans, Texas & Mexico Ry. Co., subsidiary of Gulf Coast Lines, C. S. Kirkpatrick, Ch. Engr., Houston, Tex., Louisiana & Arkansas Ry. Co., E. F. Salisbury, Ch. Engr., Minden, La., and Louisiana Ry. & Navigation Co. of Texas, subsidiary of Louisiana, Arkansas & Texas Ry. Co., W. C. Borchert, Ch. Engr., Greenville, Tex., applied to Interstate Commerce Comsn., Washington, for permission to operate by trackage rights over tracks of L. & A. between Baton Rouge and New Orleans and for building bridge over Mississippi River north of here.

Maryland — State Roads Comsn. has low bids for 2 bridges. See Roads, Streets, Paving.

Md., Frederick Junction — State Roads Comsn. L. H. Stuart, Sec., Baltimore, negotiating with Baltimore & Ohio R. R., H. A. Lane, Ch. Engr., Baltimore, for building bridge over railroad tracks.

Mo., Platte City — Platte River Drainage Dist. 1, J. A. Settle, Sec., has preliminary plans for 2 bridges over Main Ditch and 1 over Smith's Fork; B. B. Hurst, Engr., Rockport.

Missouri — State Highway Comsn. receives bids for 25 bridges. See Roads, Streets, Paving.

Missouri — See Roads, Streets, Paving.

Mo., Carthage — Missouri Pacific R. R. Co., E. A. Hadley, Ch. Engr., St. Louis, start work at once building conc. and wooden bridge over tracks, Oak St.; J. H. McFadden, Supt. of construction.

N. C., Charlotte — See Roads, Streets, Paving.

Oklahoma — State Highway Comsn., A. R. Losh, Engr., Oklahoma City, has preliminary plans for 6 span, 110-ft. rein. conc. bridge near Forgan, Beaver County; \$30,000.

Oklahoma — State Highway Comsn., A. R. Losh, Engr., Oklahoma City, has preliminary plans for 1 span 80-ft. steel truss bridge on conc. piers, Kiowa County; \$40,000.

Okla., Oklahoma City — Oklahoma County, J. F. Frazier, Engr., has plans complete for 9 bridge projects: On W. 29th St. road, \$7000; Reno Ave. underpass, Frisco R. R., \$55,000; 10 mi. southwest of Edmond, \$14,000; 3 mi. northeast of Choctaw, \$35,000; 3 mi. north of Britton, \$4000; north of Luther, \$15,000; 63rd St., \$5000; 3 mi. south on Western Ave., \$4000; 1½ mi. north on 36th St., \$3500.

South Carolina — State Highway Comsn., Ben M. Sawyer, Ch. Commr., Columbia, and Southern Ry., B. Herman, Ch. Engr., Washington, D. C., plan replacing overhead bridge, Route 29, Camp Sevier, Greenville County.

S. C., Spartanburg — Spartanburg County Highway Comsn. authorized H. B. Humbert, County Highway Engr., to draw plans for bridge over Jimmy's Creek on highway Layton Store and Hill bridge.

Tennessee — State Highway Comsn., R. H. Baker, Commr., Nashville, instructed to proceed with plans and advertise for bids for bridge and spillway at Reelfoot Lake, authorized by 1929 Legislature; T. C. McEwen, Highway Engr.

Texas — State Highway Comsn. made appropriations for 3 bridge projects.

Tex., Houston — City, J. G. McKenzie, City Bridge Engr., completing plans for Alameda Road bridge over Brays Bayou and soon begin preparing plans for Telephone road bridge over bayou; total cost about \$100,000. 9-11

Tex., San Angelo — Tom Green County, J. T. Mathison, Judge, plans conc. steel vehicular and pedestrian bridge over Concho River, Oakes St.; \$75,000.

Tex., San Antonio — City, C. M. Chambers, Mayor, opens bids Oct. 6 (extended date) for \$30,000 Martinez St. bridge over San Antonio River; rein. conc. steel, rigid frame, single span; Paul Steffler, Street Commr.; Beretta-Stiles Co., Inc., Engr., Natl. Bank of Commerce Bldg.; Phelps & Dewees, Consult. Archt., Gunter Bldg. 9-25

Virginia — State Highway Dept., receives bids for 3 bridges. See Roads, Streets, Paving.

Va., Richmond — Virginia Bridge & Iron Co., Roanoke, submitted proposal to Streets Committee of City Council to build high-level steel bridge, Ninth St., at \$650,000, or low-level steel bridge, at \$600,000.

West Virginia — State Road Comsn. has low bids for 4 bridge projects.

### Contracts Awarded

Arkansas — See Roads, Streets, Paving.

Fla., Pensacola — Escambia County Dept. of Roads and Bridges, W. E. Wheat, Engr., let contract to Royce Kershaw, Inc., Barnett Natl. Bank Bldg., Jacksonville, at \$149,496, for toll bridge over Perdido Bay, Cummings Point, Fla., to Lillian Ave., on Old Spanish Trail. 9-25

Ga., Augusta — Richmond County Comms., Augusta, and State Highway Dept., Atlanta, let contract for Fifth St. bridge over Savannah River: Conc. foundation, Wannamaker & Wells, Orangeburg, S. C., \$87,400; steel, Nashville Bridge Co., foot of Shelby Ave., Nashville, Tenn., \$107,487. 9-11

Ky., Hawesville — Perry County Bridge Comsn., Cannelton, Ind., let contract to Neeld Construction Co., Oliver Bldg., Pittsburgh,



Pa., at \$619,800 for bridge over Ohio river between Cannelton and Hawesville; work to start in about 30 days. 9-4

Ky., Louisville—Louisville & Nashville R. Co., W. H. Courtenay, Ch. Engr., advises regarding Bridge No. 38 over Cumberland River, it is not expected that construction will start on project until 1931, only contract let is for fabricated steel, to American Bridge Co., 71 Broadway, New York. 9-25

La., Shreveport—City Comsn. let contract to W. Ward Belotte, Ricou-Brewster Bldg., for Portland and Harriet St. viaduct. 9-11

La., Tallulah—Bd. of Comms. of Fourth Louisiana Levee Dist., R. K. Boney, Sec., let contract to Newsom Bros., Columbia, Miss., for 2 wooden bridges over drainage canal; plans by State Bd. of Engrs., New Orleans Court Bldg., New Orleans. 9-4

Miss., Natchez—Littrell Construction Co., New Orleans, La., has contract for 150-ft. bridge over St. Catherine Creek, lower Woodville road, of Adams County Bd. of Suprs., W. E. Hale, Clk. 8-14

Okla., Oklahoma City—Chicago, Rock Island & Pacific Ry. Co., W. H. Petersen, Ch. Engr., Chicago, Ill., and City, George F. Brown, Engr., let contract to John W. Fox, El Reno, for \$200,000 S. Walker Ave. underpass. 8-14

Tex., Houston—City, J. M. Nagle, Engr., now start building \$35,000 Yale St. bridge; J. P. Miller & Co., Gen. Contr. 8-14

### Canning and Packing Plants

Fla., Lake Wales—Ridge Canneries Co., H. S. Norman, Prop., let contract to Arch Engineering & Construction Co., Inc., Exchange Bldg., for construction of building for canning plant; welded steel arch construction designed by Arch Engineering Co.; 100 x200 ft.; mezzanine floor 80x100 ft.; exterior walls and roof covered with galv. sheets especially manufactured; construction to be completed in 5 weeks. 8-21

Fla., Winter Haven—Florida Citrus Exchange announced organization of subsidiary company, Exchange Fruit Co., for extracting and freezing juice of lower grade oranges; E. L. Wirt, Chmn. of Bd. 8-21

Fla., Eustis—Florida Cannery, Inc., capital \$30,000, incorporated; S. E. Rice, Jr., H. L. Oliver. 8-21

Fla., Fort Myers—Stripes Packing Co., incorporated; J. A. Franklin; J. Starnes. 8-21

Fla., Fort Pierce—Fort Pierce Growers Assn., Homer Needles, Pres., a subsidiary of Florida Citrus Exchange, reported, interested in erection of proposed citrus terminal. 8-4

Fla., Wauchula—Wauchula Ice & Canning Co., incorporated; L. A. Bryant, H. P. Langford. 8-4

Tex., McAllen—Dousal Co. erecting \$25,000 canning plant. 8-21

### Clayworking Plants

Tex., Brownsville—Valley Clay Products Co. formed by merger of Mission Brick & Tile Co. and Valley Clay Products Co. 8-21

Tex., Fort Worth—South West Ceramic Products Co., Independence, Mo., advises has started re-construction at Fort Worth plant; details not available for San Antonio plant. 9-25

### Coal Mines and Coke Ovens

Tenn., Coal Creek—Southern Coal & Coke Co., Holston Bank Bldg., Knoxville, reported, let contract to Freeman Bros. & Robinson, 1154 Armstrong St., Knoxville, for construction ¼ mile railway to recently acquired mine property; will be known as Southern Collieries; N. E. Cheely, Williamsburg, Ky., Resident Mgr. 9-4

W. Va., McComas—American Coal Co., controlled by Wm. C. Atwater, 1 Broadway, New York, reported, rebuilding burned coal preparation plant, dry cleaning plant and washer. 9-4

### Concrete and Cement Plants

Miss., Vicksburg—Yazoo Portland Cement Co., Ralph T. Miller, Deer Park Drive, Nashville, Tenn., reported, has option on 50 acres land for cement plant; capacity 1,000,000 blbs. cement yearly; soon let contracts. 9-4

### Cotton Compresses and Gins

Ark., Lepanto—Hollmann Bros., reported, plans rebuilding burned cotton gin. 9-25

Ga., Macon—Southeastern Compress and Warehouse Co., Eighth St., reported, leased properties of old Flora American Plywood Co., for storage. 9-25

La., Alto—Alto Gin Co., Inc., capital \$20,000, chartered; Frank B. Sartor, L. J. Mulhearn. 9-25

N. C., Shelby—Double Shoals Gin Co. incorporated; A. D. Spangler. 9-25

Tex., Houston—Exporters Compress & Warehouse Co., Cotton Exch. Bldg., reported, construct 1-story, frame cotton warehouse, 300x140 ft., on Emille St. and Buffalo Bayou. 9-25

Tex., Paint Rock—Lambreth & Heywood, reported, acquired Western Gin Co.'s plant. 9-25

### Cottonseed-Oil Mills

Va., Norfolk—Eastern Cotton Oil Co., Inc., Bd. of Trade Bldg., increased capital \$1,750,000 to \$2,750,000. 9-25

### Drainage, Dredging and Irrigation

Ala., Birmingham—City, James M. Jones, Pres., let contract to Ward Hayes Construction Co., Mound City, Ill., for drainage work on Valley Creek and Village Creek, at \$291,841 and \$95,000, respectively. 9-18

Ala., Montgomery—City and County Bd. of Revenue, J. M. Garrett, City Engr., let contract to D. R. Cook, Gay Teague Hotel, at \$41,000 for drainage work, West Montgomery Dist. 9-18

Ark., Pine Bluff—Comms. of Subdistrict No. 1 to Drainage Dist. No. 2, Jefferson County, Office of A. F. Triplett, opens bids Oct. 7 for 427,000 cu. yd. excavation, 6500 cu. yd. embankment and incidental work; Baxter Engineering Co., Engr., New Donaghey Bldg., Little Rock. 9-18

Miss., Hattiesburg—City, R. A. Chapman, Engr., let contract, at \$14,000, to E. E. Lovell, Prentiss, for drainage work including changing Gordon's Creek and laying 5-in. rein. conc. on bottom and slopes. 9-18

Tex., Galveston—U. S. Engr. Office has bid of 20 cents per cu. yd. for 112,600 cu. yd. dredging, Dickinson Bayou channel, from Linde Dredging Co., only bidder. 9-14

### Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details. 9-14

Arkansas—Arkansas Power & Light Co., Pine Bluff, Harvey C. Couch, Pres., will begin clearing of 70 ft. right of way for additional commercial high voltage power line from Carpenter hydro-electric dam to Woodward transformer station at Pine Bluff; C. S. Lynch, Ch. Engr., Arkansas Power and Light Co., will supervise work which will be in charge of E. T. Brown, Supt. of Construction. 9-14

La., Baton Rouge—Baton Rouge Electric Co., receives bids at office of Wogan & Bernard, Architects, Raymond Bldg., Baton Rouge, Oct. 8 for constructing 85x150 ft., steel stone and fireproof service building; following contractors estimating: L. W. Eaton, 1601 N. Blvd.; A. C. Stewart, 810 E. Blvd.; D. E. Chapman, Werck Bldg.; Clifford H. King, Prescott Lane; J. H. Fitzgerald, Jefferson Highway. 9-14

Md., Baltimore—Standard Oil Co. of New Jersey, 26 Broadway, New York, will erect brick power house, 3505-3525 Boston St.; 49x72 ft.; cost \$30,000; construction by owner. 9-14

Miss., Greenwood—City receives bids Oct. 7 for installing street lighting system; plans and specifications from Bonner Dugan, City Clk.; also receives bids for installation of electric automatic traffic signaling system. 9-14

Mo., Thayer—City engaged W. A. Fuller Co., 2016 Shenandoah Ave., St. Louis, as engineers for electric light plant. 9-14

N. C., Kinston—City receives bids Oct. 14 for power plant building; rein. conc. construction, brick walls, struc. steel, compo. roof; W. C. Olsen, Engr., 5 Exchange Place, Raleigh. 8-21

Okla., Hominy—City, W. R. Brady, Mayor, has under consideration erection of electric light plant; probably brick; conc. floors, steel truss, compo. roof; install Diesel engines, dynamos, generators, etc.; cost of building, \$5000; of equipment, \$35,000; R. D. Montgomery, Constr. Engr.; G. H. Blackwood, Clk. 9-25

Okla., Vinita—City has preliminary report from Russell & Axon, Engrs., McDaniel Bldg., Springfield, Mo., for power plant. 9-25

Tex., Brownwood—Brown County Water Improvement Dist. No. 1, F. S. Abney, Pres., H. G. Lucas, Sec., opens bids Nov. 1 for dam, Peach Bayou, 9 mi. north of city, to impound water for municipal and irrigation purposes; \$2,500,000 bonds voted; D. W. Ross, Engr., Brownwood. 9-25

Tex., Port Arthur—City, C. B. Moore, Finance Commr., reported, considering power plant installation. 9-25

Tex., Fort Worth—Texas Electric Service Co., A. J. Duncan, Pres., Electric Bldg., reported, plans \$750,000 improvement program; replace 7 miles of overhead distribution circuits by underground conduit and cable; install 9 mile underground feeders; rebuild rural lines between towns of Burleson, Everman, Arlington, Handley and Grand Prairie, etc. 9-25

West Virginia—South Branch Power Co., 1237 Commercial Trust Bldg., Philadelphia, Pa., proposes constructing 4 dams on South Branch of Potomac and 2 dams on Great Capacon River; dams on South Branch will probably be 80, 80, 50 and 200 ft. high and located 1, 23, 42 and 68 miles, from mouth of river; 2 dams on Great Capacon River will probably be 155 and 160 ft. high and located 4 and 32 miles from mouth of river; 50% time power available at the 6 sites is estimated to be 25,000 h. p. and the 90% time power 8500 h. p.; application to Federal Power Comsn., Washington, is for preliminary permit which if issued will grant priority to the applicant for certain period not exceeding 3 years while procuring data, and performing acts necessary to perfect an application for license; no authority to construct the project works necessary for development will be included in the permit; Capt. F. M. Butler, 50 Broadway, New York, Engr. in Charge. 9-25

W. Va., Charleston—New Kanawha Power Co., Carbide & Carbon Bldg., 30 E. Forty-second St., New York, reported, let contract to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., for delivery and erection of four 30,000 kv-a, 3 phase, 6900 volt, 25 cycle, 150 r.p.m. vertical water wheel generators with direct connected and pilot exciters in connection with development power project New River; Rinehart & Dennis, Inc., Charlottesville, Va., Contrs. 8-20

### Fertilizer Plants

Tex., Jacksonville—American Fertilizer & Chemical Works, Georgetown, Dr. J. H. Thompson, 401 Andrews Bldg., Dallas, reported, plans establishing fertilizer plant. 8-14

### Flour, Feed and Meal Mills

Ky., Louisville—Gold Proof Milling Co., Harry A. Volz, Pres., 1328 S. Fourteenth St., reported, plans rebuilding burned plant. 8-14

### Foundry and Machine Plants

D. C., Washington—Balluff Mfg. Co., 621 H St., N. W., has plans by E. W. Syme, 907 15th St., N. W., for machine shop. 8-14

### Garages and Filling Stations

Ala., Birmingham—Lucien G. Owens, reported, let contract to L. E. Ford, Mt. Brook Village, Birmingham, for filling station, 8th St. and Graymount Ave. 8-14

Ark., Dardanelle—St. Clair Oil Co., erect filling station Second St. 8-14

Ark., Gurdon—Standard Oil Co., 1320 E. Second St., reported, let contract to McGregor and Pickett, A. O. U. W. Bldg., both Little Rock, for filling station and garage; stucco and faced brick walls; tile roof. 8-14

Fla., Fort Lauderdale—Powell Motor Co. incorporated; O. N. Powell, S. E. Seventh St. 8-14

Fla., Jacksonville—Burbridge Hotel Garage, Inc., chartered; W. H. Rogers, Consolidated Bldg. 8-14

Fla., Miami—Orange State Oil Co., N. E. Fifty-eighth Terrace, erect service station Biscayne Blvd. and Eleventh St.; contractors estimating; Continental Construction Co., Exchange Bldg.; Deigaard Builders, Inc., 2075 S. W. Eighth St.; J. K. Shin & Co., 1401 N. Bayshore Drive; Geo. N. Fowler, 345 S. W. Twentieth Rd.; J. Y. Gooch, 100 Bedford Bldg.; Halsema Brothers, 1452 N. Miami Ave. 8-28

Ga., Atlanta—Goodrich Tire Co., 1133 Euclid Ave., N. E., reported, plans improvements to service station. 8-28

Ga., Savannah—Goodrich Silvertown, Inc., subsidiary of B. F. Goodrich Rubber Co., Akron, O., reported, begin work Oct. 1 on service station Drayton St. and Ogleshorpe Ave. 7-17

La., New Orleans—O. M. Gwin Construction Co., 3505 Fern St., contractor for garage 201 Dryades St., for Brunning Realty Co., receiving bids on sub contracts, including rein. steel; struc. steel; steel sash; sheet metal work; sprinkler system, etc. 8-28

Md., Baltimore—Stewart & Co. deferred awarding contract until Spring of 1931 on 40-car garage. See Buildings Proposed—Warehouses. 8-28

Miss., Vicksburg—Home Oil Co. erect filling station at Delta Point. 8-28



Mo., Boonville—Sinclair Refining Co., 1907 Grand Ave., Kansas City, reported, let contract to Fred Haas for 1-story basement, service station.

Mo., Jefferson City—Kraft Motor Co., Inc., chartered; J. E. Kraft, C. A. Krumswick, both Washington.

Mo., Joplin—Coast Tire & Battery Service, Inc., 530 Wall St., incorporated; Mercer Arnold, Joplin Natl. Bank Bldg.

Mo., Springfield—Central States Oil Co. incorporated; Wm. L. Hassett, 1107 St. Louis St.

Mo., St. Louis—Alco Investment Co., V. A. Chinberg, 808 Chestnut St., reported, erect 3-story and basement garage, Clara and Clemens Sts.; 106x175 ft., brick, terra cotta and conc.; Nolte & Naumann, Archts., 3822 West Pine Blvd.

Mo., St. Louis—M. Rodefeld, 1910 E. John St., reported, let contract to W. Rodefeld, 4684 W. Florissant Ave., for garage 46 9 Rosalie; 1 story, part basement; brick; 78x155 ft.; conc. foundations; struc. steel.

Mo., Sikeston—Continental Oil Co., Oklahoma City, Okla., reported, let contract to Roscoe Wetecke, for filling station, Kings-highway; 15x22 ft.

N. C., Asheboro—Ingram-Garner Co., capital \$100,000, incorporated; H. L. Ingram, J. P. Garner.

N. C., Reidsville—Lucky City Motors, Inc., capital \$25,000, chartered; S. P. Alexander, 330 E. Main St., Durham; G. R. Clark, Reidsville.

Okla., Holdenville—Brinson Chevrolet Co., capital \$15,000, incorporated; H. E. Brinson, R. H. Williams.

Okla., Tulsa—Specifications Motoroll System Service Stations, Inc., capital \$300,000, incorporated; Harold D. Labb, 1329 S. Evans-ton St.

Tenn., Nashville—Union Transfer Co., Fifth Ave., reported, let contract to J. B. Regler, 127 Fifth Ave., N., for service garage addition; brick, conc. and steel, fireproof, 2 story.

Tenn., Huntington—Wilder-Atkins Chevrolet Co., incorporated; B. F. Diggs, Gordon J. Wilder.

Tenn., Memphis—F. J. Ozanne Const. Co., Empire Bldg., reported, has contract for garage, N. W. cor. Mulberry and Talbot Sts., for Mrs. Thos. Dies, 1461 Winton St.; 1-story, brick, steel and rein. conc.; Joe T. Wallace, Archt., Bank of Commerce Bldg.

Tenn., Morristown—Hamblen County Motor Co. let contract to Roy Morrison, Morristown, for 1-story conc. garage; Manley & Young, Archts., Medical Arts Bldg., Knoxville, 9-24

Tex., Abilene—Christian's Super Service, capital \$25,000, incorporated; C. F. Christian, J. M. Wagstaff.

W. Va., Fairmont—American Oil Co., American Bldg., Baltimore, Md., will raze present building Jackson and Jefferson Sts.; erect brick and stucco filling station; 25x52 ft.; 1 story.

### Gas and Oil Enterprises

Ala., Talladega—Alabama Natural Gas Corp., affiliated company of Southern Natural Gas Corp., Watts Bldg., Birmingham, reported, applied to Alabama Public Service Com'n., Montgomery, for certificate of convenience and necessity to construct distributing station; hearing Oct. 6; also applied for permission to acquire municipal gas plant and system. 8-7

Ark., Fort Smith—Leavitt Oil Co., 1100 Wheeler Ave., incorporated; W. Q. Leavitt.

Fla., Miami—Standard Oil Separation Corp., incorporated; H. Dickson, 1100 S. W. 36th St.

Fla., Pensacola—Southern Natural Gas Corp., Watts Bldg., Birmingham, Ala., will begin immediate construction of Pensacola division of pipe line; 67 miles long, reaching from Pensacola to Mobile, Ala.; line will traverse about 14 miles of swamp, will follow the L. & N. right of way to east side of Tensas River; double line will be laid and regular river clamp used at each joint; 4 stream crossings of multiple line, at Bayou Sara, Canot Creek, Mobile River and at Tensas River; Natural Gas Engineering Corp., in charge of construction. 9-11

Ky., Owensboro—Ziegler Oil & Gas Co., capital \$70,000, incorporated; B. B. Tatum, John M. Young.

La., Gonzales—East Ascension Parish plans issuing \$10,000 bonds for laying and constructing pipe lines.

La., Jena—Southern Oil Corp., capital \$50,000, incorporated; J. M. Henagan.

La., Many—Lacy Petroleum Co., Inc., capital \$20,000, chartered; A. J. Burkett, Converse; J. R. Boone, Many.

Mississippi—Roger O. Moore, Tulsa Natl. Bank Bldg., Tulsa, Okla., reported, has contract for natural gas distributing systems in McComb, Brookhaven, Hazlehurst, Crystal Springs, and Terry; C. E. McMaster, McComb, has contracted for excavation work for McComb and Brookhaven.

Miss., Laurel—E. C. Deal, W. Rawson Collier and D. L. McDaniels, acquired capital stock of Mississippi Gas Co. of Laurel; corporate name of company will not be changed; no additions to plant contemplated at this time; will serve natural gas from transmission lines of Southern Natural Gas Corp., Watts Bldg., Birmingham, Ala. 9-18

Oklahoma—Stockholders of Sinclair Consolidated Oil Corp., 45 Nassau St., New York, approved sale of company's half interest in Sinclair Crude Oil Purchasing Co. and Sinclair Pipe Line Co. to Standard Oil Co. of Indiana, 910 S. Michigan Ave., Chicago, Ill., also approved creation of new issue of 5,000,000 shares of no par preference stock; will change names to Stanolind Pipe Line Co. and Stanolind Crude Oil Purchasing Co. 8-21

Oklahoma—Great Lakes Pipe Line Co., subsidiary of Barnsdell Corp., Petroleum Bldg., Tulsa, and Continental Oil Co., Ponca City, reported, let contract to Natural Gas Engineering Co., Tulsa, for approximately 180 miles of 8-in. gasoline pipe line from Kansas City to Des Moines, including Missouri River crossing at Kansas City; Wm. Schmidt, Saukville, Wis., for 236 mile of 6-in. line from Des Moines to Minneapolis; Cater Construction Co., 114 Southwest Blvd., Kansas City, Mo., for 6-in. line Des Moines to Mississippi River; Seybold-Mitchell Construction Co., Houston, Tex., for Mississippi River, including river crossing; soon let contract for pumping stations and storage tanks; contract for gathering.

Okla., Agra—Pact Gas Co., R. M. Tuttle, Pres., Cushing, reported, has gas franchise.

Okla., Carmen—City votes Oct. 2 on granting gas franchise to Winchester Oil & Gas Co., Blackwell; towns of Alma and Dacoma also considering granting franchise.

Okla., Oklahoma City—Sinclair Pipe Line Co., Tulsa, reported, let contract to Youngstown Sheet & Tube Company, Youngstown, O., for 25,000 tons pipe for 12-in. crude oil pipe line from Oklahoma City to Tiro, Kansas, with Sand Springs; at Sand Springs line will deliver crude oil to refinery recently acquired from Pierce Petroleum Corp. 5-22

Okla., Wewoka—J. W. Gwin Drilling Co., Perrine Bldg., Oklahoma City, reported, acquired oil refinery of Wewoka Refinery Co.; plans improvements.

Tenn., Chattanooga—Eagle Oil Refining Co., incorporated; John A. Chambliss, Lookout Mountain.

Tenn., Memphis—Memphis Power & Light Co., Third and Madison Sts., reported, let contract Phoenix Utility Co., 2 Rector St., New York, for gas regulation station, 535 Scott St.; brick and stone, 1 story, 23x33 ft.

Tenn., Memphis—Gulf Refining Co., Frick Bldg., Annex, Pittsburgh, Pa., reported, let contract about Oct. 15 for storage plant, Riverside Park; brick, rein. conc., steel gas storage tanks, conc. foundations; B. F. Burke, Engr., Box 400, New Orleans, La.; cost about \$1,000,000.

Tenn., Sunbright—Rock Creek Oil and Gas Co., capital \$250,000, incorporated; John A. Jones, J. H. Graham.

Tex., Albany—Loggie & Arendt Oil Co., increased capital \$13,000 to \$150,000.

Tex., Austin—Johnson Oil Refining Co., capital \$25,000, incorporated; Q. C. Taylor, Norwood Bldg.

Tex., Austin—Independent Development Co. incorporated; J. W. Allen, 3401 Guadalupe St.

Tex., Pampa—Midway Oil Co., capital \$65,000, incorporated; J. E. Murfree, Jr., J. M. Dodson.

Tex., Waco—Service Refining Co., capital \$16,000, incorporated; Joseph Kantor, 2109 Monroe St., Amarillo.

Va., Alexandria—Alexandria Gas Co., incorporated; George B. Fraser, 411 Tenth St., N. C., Washington, D. C.

W. Va., Logan—Southern Gas & Development Co. incorporated; W. T. Turner, M. C. Jennings.

### Ice and Cold-Storage Plants

La., Lake Charles—Pure Ice & Cold Storage Co., capital \$40,000, incorporated; J. W. Harding, V. P., Beaumont, Tex., plans erecting combination cold storage and ice manufacturing plant Hodges and Clarence Sts.; 80x120 ft.; conc. and steel; first unit will have capacity of 12,000 cu. ft. storage; install machinery for making 20 tons ice daily.

Tex., Pampa—Southwest Food & Refrigerating Co., reported, considering erection of

ice manufacturing plant and cold storage plant; cost \$100,000.

Tex., Denton—City, reported, plans ice plant; soon call for bids for machinery.

### Iron and Steel Plants

Ky., Ashland—American Rolling Mill Co., Middletown, O., and Ashland, reported, let contract to Hiner Structural Steel Co., Canton, Ohio, for 650 tons fab. struc. steel. 7-17

Tenn., Memphis—Chalfant Dock Co., subsidiary of Spang-Chalfant & Co., Pittsburgh, Pa., acquired 36 acres north end of Thomas St. for river-rail terminal; construct 2000-ft. conc. dock and retaining wall, double unloading track behind wall to provide space for 5 locomotive cranes, with ultimate capacity for unloading from barges and freight cars 5000 tons steel in 24 hours; establish storage yard south of dock to accommodate 100 freight cars; install self-propelling cranes; borings already made and J. W. Wharton, company's chief engineer, perfecting plans.

### Land Development

D. C., Washington—P. Drew Co., 2525 Pennsylvania Ave., N. W., reported, has contract at \$89,789 for constructing part of Meridian Hill Park development program, Sixteenth St. and Florida Ave. 3-28

Florida—Spooner-Henderson Co., Pahokee, reported, developing 1100 acres in Collier County at Lake Trafford; expend \$50,000 on farming improvements, which include a \$10,000 irrigation plant.

Fla., Fort Myers—Charles W. McAlpin, 55 W. 33rd St., New York, reported (interested in Iona colonization project, on 5400 acre tract; S. H. Rogers, reported, secretary of company organized with \$2,000,000 capital to handle project; will build packing house, precooling plant, etc.

Fla., Miami—Lincoln Properties, Inc., chartered; Grant Orr, 1655 S. W. 12th St.

Fla., Miami Beach—Miami Beach Polo Club, John D. Hertz, 4901 Collins Ave., reported, let contract to M. F. Comer Bridge & Foundation Co., 1000 N. W. North River Drive, Miami, at \$14,000 for construction of 3300 ft. of wooden bulkheading at club development on east shore of Dumboedling Bay; W. E. Brown Engineering Co., Inc., 835 Lincoln Road, Miami Beach, supervising development, Moody, Anderson Milling Inc., Hollywood completing dredging. 4-17

Georgia—Cason J. Callaway, LaGrange, develop 2500-acre game and fishing resort; construct lake.

Ky., Lexington—City, L. Segoe, City Zoning Engr., develop 30 acre tract at Castlewood for park.

La., New Orleans—Banner Realty Co., Inc., capital \$15,000, incorporated; George J. Untereiner, Masonic Temple.

La., New Orleans—Rando Realty Co., Inc., capital \$25,000, chartered; M. J. Doran, 4749 Music St.

La., New Orleans—Allard Realty Co., Inc., capital \$25,000, chartered; Jos. Mustache, 44 Allard Blvd.

Md., Baltimore—Tobias Realty Co., 1127 E. Lombard St., incorporated; Jacob Hymer, Coulter M. Thompson.

Md., Baltimore—Holding Realty Corp., 1517 Munsey Bldg., incorporated; Abraham Krieger, 4019 Barrington Road.

Md., Cumberland—Fort Cumberland Golf Club, Inc., 50 Baltimore St.; incorporated; Elmer E. Shireman, 425 Cumberland St.

N. C., Blowing Rock—Blowing Rock Improvement Co., Inc., Statesville, has under consideration installation of watering system to take care of 18 green on Green-Norwood Golf Course, 2 plans considered; to furnish pressure by compressed air, taking water from lake direct to greens, second to pump water direct from lake to tanks located 242 ft. above lake elevation. See Want Section—Machinery and Supplies.

N. C., Lexington—Vestal Co., capital \$40,000, incorporated; W. J. Vestal.

N. C., New Bern—Isaac H. Smith Realty Co., incorporated; Isaac H. Smith, 138 Queen St.

Okla., Oklahoma City—City plans improvements to Lincoln Park including new quarters for animals, bridge, and roadway improvements; Ernest B. Smith, City Park Supt.

Tenn., Memphis—City plans converting Winchester Cemetery into park; expend \$15,000.

Tex., Port Arthur—City, C. B. Moore, Finance Commr., reported, considering power plant installation.

Tex., Carrizo Springs—Loma Alto Town-site Co., incorporated; G. R. Taylor, J. George Dutt.

Va., Norfolk—Shore Point Corp., capital \$15,000, incorporated; T. L. Sawyer, 926 Moran Ave.

Va., Norfolk—Fair Development Co., incorporated; J. L. Grandy, Parkwood Court.

W. Va., Welch—Blakely-Hall Realty Co., capital \$25,000, incorporated; J. W. Blakely, W. C. Hall.

### Lumber Enterprises

Ark., Newport—J. O. Goff and B. W. Jones, reported, rebuild burned sawmill.

N. C., Hendersonville—Lakefort Timber Co., capital \$125,000, incorporated; B. Prince, Fourth Ave., W.

Okla., Bartlesville—Williams Lumber Co., Inc., chartered; M. E. Duncan, Leonard B. Williams.

Va., Suffolk—Pine Products Co., J. Eugene McKelvey, Resident Mgr., has 36 acre site; will erect sawmill, dry kiln, etc.

### Mining

Ga., Brunswick—E. J. Lavino & Co., Bulitt Bldg., Philadelphia, Pa., reported, plans \$1,000,000 improvements to plant of Georgia Manganese & Iron Co., recently acquired.

S. C., Hagood—Carolina Gravel Corp., chartered to mine gravel in State of South Carolina, with holdings at Horatio, Hagood and Cayce; G. E. Walker, Pres.; Z. C. DeBerry, Sec.; will begin construction of plant in 10 days. 9-18

N. C., Ashford—Blue Ridge Lime & Stone Corp., reported, sold \$400,000 of first mortgage 10 yr. 6% bonds to Hanover Bank & Trust Co., New York; plans improvements.

Tenn., Charleston—H. H. Rhodes, W. W. Spencer, and E. S. Fairchild, 1207 N. Lang Ave., all Pittsburgh, Pa., reported, develop lead mine nr. here; construct siding from Southern Ry. tracks; install smelter system and 2 Diesel engines of 390 h.p. each; furnaces to be made by Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.; headquarters of company will be at Chattanooga.

Va., Richmond—Carva Corp., capital \$1,200,000, chartered; Charles Rogers, 14 W. Sixth St., Charlotte, N. C.

### Miscellaneous Construction

Ala., Mobile—Following have sub-contracts in connection with transit shed of Alabama State Dock Comsn.: Steel rolling doors, Kinneair Mfg. Co., Columbus, Ohio; steel sash, Truscon Steel Co., Youngstown, Ohio; hollow metal doors, American Sheet Metal Works, 331 N. Alexander St., New Orleans, La.; piling and conc. foundations completed and struc. steel now being erected; O. M. Gwin Construction Co., Gen. Contr., 3503 Fern St. at Edinburg, New Orleans, La.

D. C., Washington—U. S. Engr. Office, Navy Bldg., let contract to Columbia Sand & Gravel Co., 3036 K St., N. W., at \$59,520 for 24,000 tons rip rap stone, Anacostia River. 7-31

Florida—Frank C. Dickey, Hollywood, Fla., Const. Engr. to Wm. C. Schoneck, Asst. Lighthouse Engr., plans constructing 2 steel range light towers, 59 and 100 ft., and including caretaker's house.

Fla., Jacksonville—City Comsn., M. W. Bishop, Sec., rejected bids for fire boat docks, foot of Washington St.; will readvertise at once. 9-11

Fla., Panama City—Gulf Refining Co. let contract to H. W. Johnson, Panama City, for repairing large bulkhead, approx. 30 ft. long along shore at St. Andrews Bay.

Fla., Titusville—Titusville Yacht Club, D. B. Pritchard, construct dock at Weist clubhouse; B. R. Raynor to have charge of construction.

Louisiana—U. S. Engr. Office, foot of Prytanis St., New Orleans, has following low bids for repairs to Atchafalaya River Levee, Second New Orleans Dist.: Lot 1, Foster Levee, 48.41 sta., Barber & Keller, \$28 per station; Lot 2, Hicks Levee, 26.37 sta., Barber & Keller, \$28 per station; Lot 3, Crooked Bayou Levee, 22.13 sta., Barber & Keller, \$25 per station; Lot 4, Baberton Levee, 52.40 sta., Barber & Keller, \$30 per station; Lot 5, McRae Crevasse, 109.07 sta., Barber & Keller, \$39 per station; Lot 6, Evans Point Levee, 0.50 sta., O. O. Ogden, Louisiana Natl. Bank Bldg., Baton Rouge, and Laiche, Miller & LeBlanc Bros., Plaquemine, both \$200 per station; Lot 7, Foster Levee Drainage Ditch, 300 cu. yd., A. L. Bird, Opelousas, 24 cents per cu. yd.; Lot, Evans Point Drainage Ditch, 7000 cu. yd., O. O. Ogden, 22½ cents per cu. yd.

La., New Orleans—Bd. of Commrs. of Port of New Orleans, New Orleans Courthouse Bldg., let contract to Louisiana Erecting Co., Industrial Canal, at \$76,703, for approx. 1100 tons steel for rebuilding Mandeville St. wharf; to American Creosote Works, Inc.,

1305 Dublin St., for supplying 300 creosoted piles for Mandeville, Charbonnet and Poland St. wharves, at \$13,872. 9-18

La., Shreveport—Bd. of Commrs. of Caddo Levee Dist., Courthouse, let contracts for Red River bank protection repairs: Havana Bend, H. N. Moody, 815 Perdido St., New Orleans, \$15,600; Corner Place Bend, E. L. \$8700; Cairo Bend, E. L. McCain, Shreveport, \$8700; Cairo Bend, E. L. McCain, Shreveport, Bend and Shreve Island Bend all to Woods Bros. Construction Co., Lincoln, Neb., at \$5500; Cash Point Bend, Twelve Mile Bayou \$805, \$11,500 and \$2000 respectively; White Hall Bend, E. L. McCain, \$9500; bids returned on One Big Willow Pass to Gilmer Ditch, new bids to be received in 2 weeks.

Missouri—U. S. Engr. Office, McCall Bldg., Memphis, opens bids Oct. 14 for constructing about 1,960,000 cu. yd. earthwork, Little River Drainage Dist., 10 mi. south of Cape Girardeau, Pieces 1A, 1B, 1C and 1D, all 51R from Cairo (above), set-back, 490,000 cu. yd. each, height 13 to 20 ft., 18 to 20 ft., 14 to 20 ft. and 13 to 19 ft. respectively.

Mo., Kansas City—Kansas City Terminal Ry. Co., J. V. Hanna, Ch. Engr., let contract to List & Weatherly Construction Co., Rwy. Exch. Bldg., for \$50,000 to \$60,000 tunnel to connect sub-basement of Union Station with basement of post office, providing space for conveyors; rein. conc., with row of steel columns along center, inside 12x26 ft., 248 ft. long. 9-18

S. C., Bluffton—R. L. Clancy, 226 E. Huntington St., Savannah, Ga., applied to U. S. Engr. Office, Savannah, Ga., for permission to construct wharf in May River; 12x12 ft., with approach 6x282 ft.

S. C., Spartanburg—Carolina, Clinchfield & Ohio Ry., V. B. Elliott, Constr. Engr., Erwin, Tenn., applied to Interstate Commerce Comsn., Washington, for permission to construct tunnel to give connection with Charleston and Western Carolina and Carolina, Clinchfield & Ohio. (See Railways, 9-25.)

Tenn., Memphis—U. S. Engr. Office, McCall Bldg., let contracts to D. M. Easley, Willson, Ark., at \$11,374, Rogers, Jones & Uzzelle, 62 S. Front St., Box 5, Memphis, at \$20,662 and to Miles T. Lee, Charleston, Mo., at \$8120, for constructing about 684,200 cu. yd. earthwork, Lower St. Francis Levee Dist. and Upper Yazoo Levee Dist. 9-11

Tennessee—Spillway—See Bridges, Culverts and Viaducts.

Tex., Houston—Manchester Terminal Corp., Cotton Exch. Bldg., let contract to Don Hall Constructor, Inc., Union Natl. Bank Bldg., for \$50,000 rein. conc. addition to terminal wharf on Houston Ship Channel at Manchester.

Va., Buena Vista—W. P. Newland has contract for elevator for Buena Vista Mills at Loch Laird to accommodate 10,000 to 12,000 bu. wheat; started construction.

### Miscellaneous Enterprises

Ark., Jonesboro—Jonesboro Rice Milling Co., Harry E. Bovay, Pres., Dermont Bldg., reported, let contract to E. G. Hodges, Cotton Exchange Bldg., Memphis, Tenn., for rice mill; corrugated iron; 4 story; 42x42 ft.; cost \$125,000. 9-18

Ark., Little Rock—Arkansas Democrat Co., reported, acquired building now under construction at Capitol Ave. and Scott St. as newspaper plant.

Ark., Paragould—Coca Cola Co., J. Lee Brown, Mgr., plans warehouse; brick; 30x60 ft.; Wm. Stuck, Archt.

Fla., Brooksville—Weeks Chemical Corp., chartered; P. L. R. O. Weeks.

Fla., Oneco—P. C. Brooks, Oneco, acquired dairy east of Palmetto owned by James W. Nettles; plans consolidating both dairies at Oneco.

Ga., Atlanta—G. C. Moore, 140 Pine St., N. E., has contract for alterations for building 127 Ellis St., N. E., for Foremost Dairy Products, Inc. 8-21

Ky., Frankfort—Allmen Preserving Co., capital \$125,000, incorporated; Emil Von Allmen.

La., New Orleans—Triangle Amusement Co., Inc., capital \$50,000, incorporated; Jos. U. Folse, Jr., 931 Broadway.

Md., Baltimore—Chestnut Farms Dairy, Inc., Pennsylvania Ave. & 26th St., N. W., Washington, D. C., branch of National Dairy Products, Inc., 120 Broadway, New York, having private plans drawn for rebuilding recently acquired plant, Hanover and Barre Sts., and for 3 or 4 story brick and steel structure, white enamel brick and tile interior; plate glass front; will include garage and stable accommodations; Consolidated Engineering Co., 20 E. Franklin St., Gen. Contrs.; reported, cost of completed plant \$1,000,000. 8-28

Md., Baltimore—M. H. C. Chemical Co., Inc., 301 American Trust Bldg., incorporated; S. Russell Wilson, Towson; James F. Thrift, 216 St. Paul St., Baltimore.

Md., Darlington—Donald Symington, Baltimore Trust Bldg., Baltimore, Md., let contract to Bailey & Coale, Belair for dairy house; Fawn Grove Lumber Co., Fawn Grove, Pa., for 2 bungalows for tenant houses at Indian Springs Farms, W. S. Austin, Const. Engr., Maryland Trust Bldg., Baltimore. 9-11

Md., Baltimore—Arundel Corp., Pier 2, Pratt St., let contract to M. A. Long Co., 10 W. Chase St., for rebuilding burned machine shop at 2100 Frankfort Ave., Fairfield; steel, 400x50 ft.; cost \$25,000.

Mo., Carthage—George Miller supervising reconditioning of former Juvenile Corps building Cor. Garrison Ave. and Oak St., as plant for Wolf-Tober Shoe Mfg. Co., 2511 Sulvan St., St. Louis. 9-25

Mo., Kansas City—Easthomm-Melvin, Inc., incorporated; Wm. T. Alford, Scarritt Bldg.; construction.

Mo., Maplewood—The Laundry, Inc., reported, let contract to Austin Co., 1102 Arcade Bldg., St. Louis, to remodel and repair laundry, 7315 Manchester Ave.; 1 story, brick and conc.; cost \$50,000.

Mo., St. Louis—Panyard Piston Ring Co. incorporated; E. C. NaDal, 1020 Art Hill; A. W. Lucks, 1721 N. Thirteenth St.

Mo., St. Louis—Mississippi Valley Structural Steel Co., 3117 Big Bend Rd., reported, has contract for 500 tons fab. struc. steel, Globe-Democrat Bldg. 7-24

Mo., St. Louis—Westlake Constr. Co., Ry. Exchange Bldg., reported, has contract for building, High and Franklin Sts., for Globe-Democrat; brick, stone, steel and conc.; 5-story; 340x103 ft.; Martin Engr. Co., Struc. Engrs., Ry. Exchange Bldg.

Mo., St. Louis—Sun Bright Cleaning & Dyeing Co., Inc., chartered; Emil Burkhardt, 4351 Olive St.

Mo., St. Louis—Sunshine Family Laundry Service Co., 2323 Rutger St., let contract to W. C. Harting Constr. Co., 722 Chestnut St., for 1 and 2-story laundry and locker room; 50x100 ft.

Mo., St. Louis—Midwest Industrial Development Co., subsidiary of Illinois Terminal R. R. Sstem, 231 La Salle St., Chicago, Ill., reported, have plans ready for bids in Nov. for publishing building High, Morgan and Twelfth Sts.; Elzey Roberts, Publisher, Star Bldg., Lessee; Frank R. Chase, Inc., Archts., 720 N. Michigan Blvd., Chicago; building will be 5 story, brick, stone and rein. conc., fireproof; basement and sub-basement; 120x168 ft.; cost about \$1,500,000.

Mo., St. Louis—Gibbs & Co. incorporated; Roland S. Baker, Kirkwood, Allan M. MacEwan, 4319 Lindell Bldg., St. Louis; manufacture beauty preparations.

Mo., St. Louis—Sym Products, Inc., chartered; Wm. F. Fitzgerald, 5653 Julian St.; manufacture chemicals.

Mo., St. Louis—Bailey Farm & Dairy Co., 5005 Alabama Ave., reported, let contract to Kellerman Contg. Co., Buder Bldg., for 2 story and basement, 37x90 ft. milk distribution plant, Delor and Alabama Aves. 9-4

Mo., St. Louis—Wind Mill Bakeries, Inc., chartered; J. G. Edwards, 1005 Hi-Point Place.

N. C., Goldsboro—Big Frosty Bottling Co., Inc., \$100,000, incorporated; O. L. Hutaff, L. C. King.

N. C., Leaksville—Twin City Baking Co., capital \$50,000, incorporated; Z. V. Tucker, J. E. Patterson.

N. C., Roanoke Rapids—Thompson Construction Co., capital \$100,000, incorporated; S. M. Thompson, Rosemary; J. T. Thomason, Roanoke Rapids.

Okla., Tulsa—City, reported, rejected bids for installation traffic signals; will call for new bids.

S. C., Charleston—Liberty Life Insurance Co., 35 George St., acquired People's Life Insurance Co., 434 King St.

S. C., New Brookland—J. R. Hendrix Dairy, chartered; J. R. Hendrix.

Tenn., Carthage—Tennessee Loose-Leaf Tobacco Co., capital \$100,000, incorporated Alex C. Read, Joe C. Davis.

Tenn., Chattanooga—The Prest-O-Lite Co., Inc., Carbide & Carbon Bldg., 30 E. Forty-second St., New York, advises plans for new plants at Chattanooga are indefinite at present time, only thing done at present time is to make arrangements for purchase of property; R. N. Shepard, Asst. Engr. of Construction. 8-21



Tenn., Lebanon—Coca Cola Bottling Works, E. F. Judd, 1527 Church St., Nashville, construct bottling plant; brick and steel, 2 story, 30x60 ft., cost \$50,000; Asmus & Clark, Architects, 1415 Nashville Trust Bldg., Nashville.

Tenn., Memphis—Upjohn Chemical Co., Kalamazoo, Mich., reported, let contract to S. Malkin, 160 Union St., for warehouse and distributing center S. W. Cor. Pontotoc and Front Sts.; 2 story; rein. conc.; 50x170 ft.; cost \$37,500; Harker & Cairns, Archt., Court Sq. Bldg. 8-21

Tex., Harlingen—Arroyo Building Co. chartered; C. B. Wood, A. H. Harwood.

Tex., Houston—Mayfair Publishing Co., M. & M. Bldg., increased capital, \$100,000 to \$200,000.

Tex., Houston—Houston Bottling Co., 3314 Harrisburg St., increased capital, \$30,000 to \$550,000.

Tex., Houston—Reliable Meter Co., capital \$25,000, incorporated; R. E. Davis, 4206 Garrow St.

Tex., Laredo—Texas Harvest Hat Co., San Agustin St., erecting 72x116-ft. factory building; 2 story, conc., brick and tile, cement and wood floors; Barrett specification roof; Ortiz Bros., Contrs., Box 1053, Laredo. See Want Section—Machinery and Supplies. 9-25

Virginia—W. F. Taylor, Pres., John H. Rodgers and W. F. Taylor, Bd. of Directors, Law Bldg., Norfolk, of company acquiring control of Southgate-Nelson Corp., operators of American-Hampton Roads Line.

W. Va., Fairmont—C. L. Chapman and associates, reported, acquired mines and plant of Home Service Coal Co., Carleton St. and Aliver Ave., will be known as Home Fuel Co.; install additional equipment.

### Motor Bus Lines and Terminals

D. C., Washington—Pennsylvania R. R., Broad St. Station Bldg., Philadelphia, T. J. Skillman, Ch. Engr., advises do not know of any plans for hotel and bus terminal in Washington backed by Pennsylvania R. R. 9-25

Fla., Miami—Florida Motor Lines, Inc., 20 N. W. Second St., reported, plans improvements to terminal.

La., Shreveport—Shreveport Railway Co., applied for franchise for operating trackless trolley on Union Depot and Fairfield lines; subject to vote Nov. 4.

N. C., Burlington—Barnwell Bros., Inc., Elmira St., operate motor trucks from Burlington to New York City over Route No. 1 from Henderson, Richmond, Va., Washington and Philadelphia. 9-25

N. C., High Point—Carolina Transportation and Distributing Co., capital \$100,000, incorporated; Charles H. Frederickson, 2006 Norton Road, Charlotte.

Okl., Oklahoma City—Southwestern Motor Carriers, Inc., incorporated; L. C. Giles, Norman.

Tenn., Nashville—State Railroad and Public Utilities Comsn. approved sale of Nashville-Hartsville bus line to Consolidated Bus Line of Smithville.

Tex., Kerrville—Kerrville Bus Co., Charles V. Peterson, Pres., acquired 330 mile bus line operated by W. H. Winn, Jr., operating between Austin and Houston.

Va., Lynchburg—Piedmont Bus Corp., capital \$25,000, incorporated; Lloyd H. Hudson, Amerst. Va.

W. Va., Bluefield—Carroll R. Woods, Pres., Pocahontas Transportation Co., C. C. Bldg., will operate bus line between Bluefield and Roanoke, Va.

### Railways

La., Baton Rouge—See Bridges, Culverts and Viaducts.

Mo., Kansas City—Kansas City Terminal Ry., J. V. Hanna, Ch. Engr., applied to Interstate Commerce Comn., Washington, for permission to proceed with construction on 4500 ft. new double track, Fourth and Bluff St. to Holmes St., at intersection with Missouri Pacific.

S. C., Spartanburg—See Miscellaneous Construction.

Texas—New Orleans, Texas & Mexico Ry. Co., O. P. Van Swearingen, Ch. of Bd., Cleveland, Ohio, applied to Interstate Commerce Comn., Washington, for permission to acquire entire stock and control of Rio Grande & Eagle Pass Ry. Co., R. W. Davis, Asst. to Pres. and Ch. Engr., Dolores, Tex.

Va., Roanoke—Norfolk & Western Ry. Co., C. Cooke, Pur. Agt., reported, announced plans for expanding \$1,100,000 for constructing 10 large Mallet freight locomotives and tenders at local shops.

### Railway Shops and Terminals

Tex., Cleburne—Gulf, Colorado & Santa Fe Ry. Co., F. Merritt, Ch. Engr., Galveston, let contract in near future for shops, part of building program involving several million which has been under way for 2 years. 3-6

### Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

#### Proposed Construction

Alabama—State Highway Comsn., Woolsey Fennell, opens bids Oct. 21 for 2 roads and 2 bridges: Dade-Pike Counties—bit. surfacing, Bee Line Highway, Troy to Brundidge; Coffee County—overhead pass over Atlantic Coast Line track between Elba and Samson; bridge over Buck's Creek between Elba and Sampson; Winston County—reopen bids for road previously advertised for October 20; also for back-filling approaches to Rocky Creek Bridge, Winston County, State Proj. 184, 8843 cu. yd. excavation.

Alabama—State Highway Comsn., Woolsey Fennell, Director, opens bids Oct. 14 for 9.913 mi. bit. conc., sheet asphalt or cement conc. paving, Bessemer to Tuscaloosa, Jefferson County, F. A. Proj. 145-A, 105,600 sq. yd. paving; opens bids Oct. 21 for bit. treating, F. A. Proj. 6 4and 65, Troy to Brundidge, Pike County, State Proj. 490, 184,250 sq. yd. double surface bit. treatment.

Ala., Birmingham—City, A. J. Hawkins, Engr., plans paving Georgia road.

Ala., Mobile—City Comsn. plans expending \$485,000 substituting other surfacing for wood block paving, including Dauphin, Broad, Michigan Ave., Hallett, Ann, Georgia Ave., Bayou, Madison and Conception St. Ave. and other sections; probably ask bids soon.

D. C., Washington—Capt. H. C. Whitehurst, Highway Engr., submitted highway and bridge improvement program extending over period of years calling for \$29,502,800 expenditure to District Comma.; calls for \$24,170,850 for specified street and bridge projects in next 5 years and \$5,332,000 for 5 succeeding years.

Florida—State Road Dept., B. M. Duncan, Engr., Tallahassee, opens bids Oct. 6 for 3 roads and 3 bridges: Okaloosa County—2 creosoted timber bridges with steel I-beam channel spans, 635-ft. across Tom's Bayou and 1360-ft. across Rocky Bayou, Proj. 802B, Road 10; Putman County—bridge over Dunn's Creek, 160-ft. steel swing span on conc. pier, 6 30-ft. rein. conc. deck girder approach spans on precast conc. piling, Proj. 952, Road 3; Lake County—4.48 mi. grading, draining, retaining walls, Tavares to Mount Dora, Proj. FA 53-D, Road 2; 2.48 mi. grading, draining, Eustis to intersection with road, Tavares to Mount Dora; Lafayette County—13.2 mi. laying Florida lime rock base.

Fla., St. Petersburg—Pinellas County Comsn., Pinellas, opens bids Oct. 7 for paving street here.

Georgia—State Highway Comsn., J. W. Barnett, Chmn., Atlanta, opens bids Oct. 15 for 0.36 mi. top soil, Zebulon-Barnesville road, Lamar County, 14,000 cu. yd. common borrow excavation.

Ga., Cuthbert—City, R. A. Patterson, Mayor, A. C. Moye, Jr., Clk., opens bids Oct. 27 for street improvements, 2600 cu. yd. roadway excavation, 10,272 sq. yd. roadway pavement, 4142 lin. ft. 6x18-ft. conc. curb and gutter, etc.

Kentucky—State Highway Comsn., H. D. Palmore, Engr., Frankfort, has low bid from Berry & Kelly, Louisville, at \$17,006, for grading 0.650 mi. and surfacing approach fills for bridge, FA 169-CB, Hardin County.

Louisiana—State Highway Comsn., O. K. Allen, Chmn., Baton Rouge, will advertise \$500,000 gravel road construction at once to be let within 30 days.

La., Lake Charles—City Council granted Missouri Pacific R. R. Co., E. A. Hadley, Ch. Engr., St. Louis, Mo., trackage rights on Front St.; railroad to pave street and make other improvements; \$30,000. 9-18

La., Shreveport—City Comsn. ordered acquisition of Milam St. property for extension of street to Reynolds.

Maryland—State Roads Comsn., H. L. Steuart, Sec., Baltimore, has low bids for 5 roads: Baltimore City—0.91 mi. sheet asphalt, Cont. BC 96-74, National Paving & Contracting Co., Menlo Drive & Western Maryland R. R., Baltimore, \$70,221; Prince

George's County—1.17 mi. conc., Cont. P-138-34, Christif & Ensey, 1635 Ridgely St., Baltimore, \$16,185; 1.2 mi. hot or cold bit. mix. resurfacing, Cont. P-139-32, Wm. P. McDonald Construction Co., 381 Fourth Ave., New York; 0.9 mi. penetration macad. resurfacing, Cont. P-140-34, M. J. Grove Lime Co., Lime Kill, \$9832; .06 mi. conc. shoulders, Cont. P-141-32, A. C. Conaway, Savage, \$3791. 9-18

Mississippi—State Highway Comsn., C. M. Williamson, Director, opens bids Oct. 13 for 7 roads: Jones County—7.412 mi. cement conc. or sheet asphalt paving, section of Laurel-Meridian road and Laurel-Ellisville road, F. A. Proj. L83 and 70-B, respectively; Lauderdale County—11.296 mi. grading, cement conc., sheet asphalt or asphaltic conc. paving, Meridian-Livingston (Alabama) road, F. A. Proj. 117, 103,067 cu. yd. excavation, 104 lin. ft. 18-in. culvert pipe, 46,988 lb. rein. steel, 59,356 lb. rein. steel in bridges, 45,750 lb. struc. steel in bridges; Madison County—3.977 mi. cement conc., sheet asphalt or asphaltic conc. paving, Pocahontas-Flora road, F. A. Proj. 198-B; 10.871 mi. cement conc., sheet asphalt or asphaltic conc., Tougaloo-Canton road, F. A. Proj. 79; Leflore County—7.642 mi. cement conc., sheet asphalt or asphaltic conc., Itta Bena-Greenwood road, F. A. Proj. 195-B and 205-A; Hinds County—13.489 mi. cement conc., sheet asphalt or asphaltic conc., Jackson-Pocahontas road, F. A. Proj. 198-A.

Mississippi—State Highway Comsn., Jackson, let contract to Clark & McCaa, Jackson, at \$20,703, for 13.183 mi. surfacing Section A, B and C, Oxford-Sardis road, Lafayette County. 9-11

Miss., Greenwood—City plans expending \$55,000 paving Grand Blvd., North Greenwood. See Financial News Columns.

Missouri—State Highway Comsn., T. H. Cutler, Ch. Engr., Jefferson City, opens bids Oct. 11 for 32 roads and 25 bridges: Geny County—1.736 mi. 14-ft. gravel, Evona-McFall, 22,006 cu. yd. excavation, 25,250 lb. struc. steel, I-beam bridge over Evona Creek SA-1; Macon County—4.890, 4.981 mi. 16-ft. gravel, Atlanta-Elmer, 31,449 cu. yd. excavation, 34,360 lb. struc. steel, I-beam bridge over east fork Chariton River, SJ-1 and SJ-2; Audrain County—1.957 mi. 16-ft. gravel, Mexico north, 3900 cu. yd. excavation, SJ-1; Knox County—7.837, 1.63 mi. 16-ft. gravel, Swan Corner-Leonard, 12,600 cu. yd. excavation, 32,140 lb. struc. steel, I-beam bridge over North River, SJ-1 and SN-1; Clay County—3.769 mi. 3-ft. graded earth, Excelsior Springs south, 67,615 cu. yd. excavation, Ref. 3; Saline County—3.409, 2.405, 2.708, 2.670 mi. 12-ft. crushed stone, Route 65-Nelson, 8731 cu. yd. excavation, SH-1A, 12-2A, SH-3, SH-4; Boone County—1.038 mi. 18-ft. gravel, Route 22-Sturgeon, 4971 cu. yd. excavation, SV-1; Camden County—0.371 mi. 30-ft. graded earth, Nangua River, 4672 cu. yd. excavation, 1771 cu. yd. conc. in bridges, 2,083,900 lb. struc. steel, bridge over Nangua River, including 2 196-ft. trusses, 2 245-ft. anchor spans, 2 73-ft. 6-in. cantilever spans, 196-ft. suspended span, 328G; St. Louis County—0.310 mi. 36-ft. graded earth, Meramec River, 16,408 cu. yd. excavation, 2612 cu. yd. conc. in bridges, 1,379,190 lb. struc. steel, bridge over Meramec River, 3 40-ft. I-beams, 3 20-ft. and 9 60-ft. deck plate girders and 3 130-ft. deck trusses, 66TR-11; Washington County—4.713 mi. 16-ft. gravel, Potosi-St. Francois County, 14,848 cu. yd. excavation, bridge over west branch Mill Creek, SA-1; Dade County—4.116 mi. 16-ft. chat, Greenfield-Everton, 23,192 cu. yd. excavation, 63,970 lb. struc. steel, bridge over dry branch, 12-19; Jasper County—0.615 mi. 30-ft. graded earth, 13,998 cu. yd. excavation, 639,770 lb. struc. steel, 2 bridges over Center Creek overflow and over Center Creek, SB-2; 2.601, 3.364 mi. 16-ft. chat, Carthage west, 26,333 cu. yd. excavation, 2 bridges over creek and branch, SC-1 and SC-2; MacDonald County—0.873 mi. 16-ft. gravel, Tiff City east, 11,889 cu. yd. excavation, I-beam bridge over Buffalo Creek, SA-1; 3.975, 3.977 mi. 18-ft. gravel, Pineville-Arkansas line, 140,545 cu. yd. excavation, 4 bridges over dry branch, brush creek, Miser Hollow and over ditch, 88-4 and 88-5; Newton County—2.626, 4.753, 1.384 mi. 16-ft. chat, Fairview east and west and Granby south, 22,008 cu. yd. excavation, 2 bridges over dry branch and over Sweet Water Branch, SR-1, SH-2 and SH-3; St. Clair County—4.103, 1.345 mi. 16-ft. gravel, Lowry City west, 14,076 cu. yd. excavation, SA-1, SA-2; Wright County—3.636, 4.492 mi. 18-ft. gravel, Hartville-Mansfield and Mansfield-Norwood, 99,761 cu. yd. excavation, 3 bridges over branch, Clark Creek and creek, 5-84A, 60-40; Butler County—0.553 mi. 18-ft. gravel, Little River, 20,811 cu. yd. excavation, 2 bridges over Little Black River, 42-16; Mississippi County—I-beam bridge over Wolf-Hole Lateral Ditch No. 14; Madison County—4.919, 3.440 mi. 24-ft. graded earth, Route 67-Saco, 8597 cu. yd. excavation, Ref. 2-1, Ref. 2-2.

Missouri—State Highway Comsn., T. H. Cutler, Ch. Engr., Jefferson City, has low bids for 75 roads and bridge: Atchison County—2,852, 4,353 mi. 24-ft. graded earth, SA-1, SA-2, Knutson Bros., 3520 Main St., Kansas City, \$26,043, \$11,719, respectively; Barry County—3,468, 3,491 mi. 16-ft. gravel, SB-1, SB-2, C. I. Williams, Monett, \$18,060, \$14,138, respectively; Bates County—4,960 mi. 18-ft. chas., 5-3, H. H. Ruddell, 759 Stanford St., Springfield, \$37,598; Benton County—3,239 mi. 18-ft. gravel, 52-34A, M. E. Gillioz, Monett, \$5086; Bollinger County—2,708 mi. 12-ft. gravel, SC-2, Kiefner & Gelle, Perryville, \$19,387; Stoddard County—2,872 mi. 12-ft. gravel, SC-1, Kiefner & Gelle, \$20,094; Buchanan County—2,410, 2,596 mi. 20-ft. conc., 71AP-30, Gaines Bros., Jefferson City, \$66,986 and \$86,035, respectively; 4,585 mi. 14-ft. crushed stone, SP-1, Martin Wunderlich, St. Paul, Minn., \$14,577.

In Cass County—3,267 mi. 12-ft. chas., SA-2, Pioneer Construction Co., Glover Bldg., Kansas City, \$11,067; Cedar County—3,466 mi. 18-ft. gravel, 39-4, R. H. Sharp, Reeds Spring, \$28,962; Dallas County—1,980 mi. 16-ft. gravel, 65-83A, J. A. Kerr Co., \$13,019; Douglas County—4,140, 4,226 mi. 16-ft. gravel, 14-24A, 14-25A, W. D. Knoll, Gainesville, \$4075 and \$4176; Dunklin County—0,542 mi. 9-ft. conc. and 9-ft. gravel, 82-1, Geo. H. Gassman Construction Co., Poplar Bluff, \$10,759; New Madrid County—2,072 mi. 9-ft. conc. and 9-ft. gravel, 82-2A, Geo. H. Gassman Construction Co., \$24,799; Greene County—4,943 mi. 18-ft. gravel or 18-ft. crushed stone, SA-1, J. A. Kerr, Ozark, \$33,511 and W. D. Knoll, Gainesville, \$36,512, respectively; Howell County—4,188 mi. 24-ft. graded earth, SB-3, Carte-Harlin Construction Co., West Plains, \$16,092; Henry County—4,195, 2,491 mi. 12-ft. chas., SA-1, SB-1, O. O. Fuller, Nevada, Mo., \$16,312 and \$46,682.

In Iron County—1,597, 2,485 mi. 18 and 16-ft. gravel, 70-3, SE-1, Service Construction Co., Poplar Bluff, \$113,135 and \$20,916; Jackson County—3,327, 3,654 mi. 20-ft. conc., 18A and 18B, W. A. Ross Construction Co., N. W. 25th and Summit St., Kansas City, \$65,969 and \$91,178; 0,076 mi. bridge, 40-6B, Perry McGlone, Harrisonville, 10,462; 1,849 mi. 36-ft. conc., 24-2, Brosnahan Bros., City Bank Bldg., Kansas City, \$103,302; Jefferson County—3,037, 2,932 mi. 16-ft. gravel, SZ-1 and SZ-2, C. P. O'Reilly Construction Co., Wainwright Bldg., St. Louis, \$4459 and \$4281; Laclede County—3,444, 2,598 mi. 18-ft. gravel, 5-75 and 5-78, J. A. Kerr, Ozark, \$23,592 and \$22,907; Lawrence County—3,590 mi. 6-ft. chas., SA-5, C. I. Williams, 14,794; Lewis County—2,652 mi. 24-ft. graded earth, SD-1, A. P. Munsen, Marion, Ia., \$17,336.

In Livingston County—4,124 mi. 16-ft. gravel, SA-1, C. W. Rose, Brookfield, \$14,515; Maries County—2,993 mi. 18-ft. gravel, 28-15, Martin Wunderlich, \$25,487; Miller County—2,691 mi. 30-ft. graded earth, 328A, Gaines Bros., \$53,887; Camden County—2,281, 4,046, 3,967, 4,007, 3,683 mi. 30-ft. graded earth, 328B, 328C, 328D, 328E, 328F, Gaines Bros., \$39,484, \$26,124, \$81,873, \$37,263 and \$37,263, respectively; Montgomery County—4,015 mi. 16-ft. gravel, SD-1, H. D. Thomas, Fulton, \$22,353; Mississippi County—7,882 mi. 9-ft. conc. and 9-ft. gravel, Ref. 6, Geo. H. Gassman Construction Co., \$28,668; 1,338 mi. 24-ft. graded earth, Ref. 7, R. B. Potashnick, Cape Girardeau, \$3579; 1,338 mi. 12-ft. gravel, same contractor, \$1118; Scott County—3,526, 1,757 mi. 12-ft. gravel, SD-1 and SN-4, R. B. Potashnick, \$16,222 and \$3071.

In Monroe County—3,346, 2,905, 3,175 mi. 24-ft. graded earth, SD-3, SM-1 and SH-2, Cameron Joyce Co., Keokuk, Ia., for first, \$9158; H. D. Thomas, Fulton, for others, \$6306 and \$7485; Ralls County—2,548 mi. 16-ft. gravel, SD-1, R. G. Aldridge, 1310 State Ave., Kansas City, \$19,408; Oregon County—4,420 mi. 24-ft. graded earth, SA-1, Chaney & Amyx, Branson, \$16,839; Ozark County—5,000 mi. 24-ft. graded earth, SM-1, Carte-Harlin Construction Co., \$30,811; Pettis County—2,538, 2,986 mi. 12-ft. gravel, SA-2 and SA-3, H. H. Ruddell, Springfield, \$9020; 0,838 mi. 20-ft. conc., 50-19, Davis Construction Co., Booneville, \$15,800; 1,650 mi. 20 and 30-ft. conc., 65-52, same contractor, \$41,095; 4,801, 4,671, 3,557 mi. 18-ft. gravel, 52-28A, 52-29A and 52-30A, L. W. Hayes Construction Co., Bethany, \$8726, \$8428 and \$6539; Platte County—8,558, 3,740 mi. 9-ft. gravel, 92-1B and 92-2A, Sitton Truck Transfer Co., Kansas City, \$678 and \$1024.

In Riley County—3,130, 2,439 mi. 12-ft. gravel, SB-1 and SB-2, \$15,699 and \$14,296; St. Louis County—3,200 mi. 36 and 56-ft. graded earth, 66TR-10 and 66TR-13, L. Gray, St. Louis, \$54,164 and \$60,243; Schuyler County—4,564 mi. 16-ft. gravel, SA-1, C. H. Atkinson Paving Co., Watertown, S. D., \$23,717; Shannon County—3,718 mi. 18-ft. gravel, 60-78 Kelley & Underwood, Gracely, \$46,589; Stoddard County—4,347 mi. 12-ft. gravel, SA-1, Richmond Construction Co., Ad-

vance, \$13,389; Texas County—4,907, 5,000 mi. 16-ft. gravel, 17-27A and 17-28A, Chaney & Amyx, \$10,622 and \$8860; 1,667 mi. 30-ft. graded earth, 32-1, W. F. Fogleman, Fallon, \$10,135; Vernon County—0,345 mi. 20-ft. conc., 71-80-A, Maxwell Construction Co., Columbus, Kan., \$37,697; Wayne County—3,270 mi. 24-ft. graded earth, SA-1, Martin Wunderlich, \$24,040.

Mo., Clayton—St. Louis County, Walter E. Miller, Clk., has low bid from Skrainka Construction Co., Security Bldg., at \$22,121, for paving Lawler Dr., Proj. No. 9; Roy Jablonsky, Highway Engr.

Mo., Clayton—St. Louis County Court ordered Highway Engr. to receive bids Oct. 8 for 10 mi. roads, including, Litzinger road, Ballas road, Marshall road, Old Florissant road, Hibler road, Pennsylvania Ave., Southwest Ave., St. Louis.

Mo., Thayer—City, care Clk., has preliminary plans in progress for paving various streets; W. A. Fuller Co., Engr., 2916 Shenandoah Ave., St. Louis.

N. C., Charlotte—City Mgr. will receive bids at once for S. College St. opening project, including underpass to be built jointly by City and Southern Ry., B. Herman, Ch. Engr., Washington, D. C.

N. C., Roxboro—City opens bids Oct. 7 for 30,000 sq. yd. surface treating streets; Spoon & Lewis, Const. Engrs., Greensboro.

Oklahoma—State Highway Comsn., A. R. Losh, Engr., Oklahoma City, opens bids Oct. 13 for 2 roads: Pawnee County—0,847 mi. grading, draining, S. H. 25, Cleveland to bridge over Arkansas River, \$147 cu. yd. excavation, 3244 lb. rein. steel, State Aid Proj. 698; Texas County—22 mi. grading, draining, Texas state line northeasterly to Guymon, 209,503 cu. yd. excavation, 1072 cu. yd. conc., 90,289 lb. rein. steel, State Aid Proj. 220.

Okl., Oklahoma City—Oklahoma County, J. F. Frazier, Engr., drawing plans for 22½ mi. paving.

Tex., San Saba—City, care Mayor, and San Saba County, R. E. Gray, Judge, have funds appropriated by State Highway Comsn., Austin, for 2/3 aid for 20 ft. wide strip of proposed 36 ft. width paving, State Highways 4 and 89 through San Saba.

Texas—State Highway Comsn., Gibb Gilchrist, Engr., Austin, appropriated \$394,810 for maintenance of 22 roads and 3 bridges: Galveston County—26.2 mi. oil mix shell, Highway 124, Point Bolivar to High Island, \$25,000; Chambers County—10.7 mi. shell surfacing, Highway 125, Chambers-Jefferson Counties line and intersection of Highway 125 and 61 near Anahuac, \$73,053; Orange County—cleaning and painting Sabine River Bridge, Highway 5, \$4000; Robertson County—12.3 mi. graveling and oiling, Highway 6, Hearne to Brazos County line, \$26,626; Coleman County, 2100 ft. single bit. surface treatment, Highway 107, town of Santa Anna, \$949; Winkler County—10.4 mi. maintenance, Highway 82, New Mexico state line to Kermit, \$2126; Brewster County—2 mi. machine grading, Highway 5, Pecos-Brewster County line west, \$1398; Eastland County—17.5 mi. Highway 1, Eastland west to Eastland-Callahan County line, \$1312; Callahan County—17.4 mi. survey and plans for widening, Highway 1, Eastland-Callahan County line to Baird, \$1308; Refugio County—11.2 mi. maintenance, Highway 113, Victoria County line to Tivoli, \$4504; Erath County—18.3 mi. placing addition caliche on impassable sections, Somervell-Erath County line to Stephenville, \$5000; Webb County—8.3 mi. additional base material and asphalt oil mixed surface, Highway 4, 5.8 mi. south of Laredo to Zapata County line, \$44,182; Hudspeth County—3.9 mi. single bit. surface treating, Highway 1, Lasca east, \$6407; Cherokee County—9999 ft. gravel base, Highway 43, Mud Creek Bottom on new grade, \$3465; Harrison County—7 mi. widening roadway and structures, gravel base and bit. surface treating, Highway 15, Gregg County line to Hallsville, \$48,000; Hall County—1.7 mi. gravel surfacing, Highway 5 near Estelline, \$12,000; Fannin County—6.5 mi. widening roadway, Highway 42, Hunt County line to point 4.5 mi. north of Leonard, \$38,959; Wilson County—910 ft. paving approaches to Cibola Creek, Highway 81, \$916, \$2400 for miscellaneous expenses; Garza County—replace washed out dip with timber trestle, Highway 7, 2 mi. south of Post City, \$869; Potter County—32 mi. maintenance, Highway 136, Stinnett to Amarillo, \$7402; Randall County—1331 ft. caliche base and bit. surface treatment, Highway 33, \$1641; Leon County—0.1 mi. grading, draining, Highway 7, Farwell southeast, \$2496; Bastrop County—6 mi. widening and oil surface treatment, Highway 71, Bastrop to Halfway, \$22,478; Grayson County—half cost of underpass on St. Louis Southwestern Ry., Whitewright, Highway 78, \$5000, railway to bear remainder of cost.

Tex., Houston—City Council adopted resolution calling for widening N. Main St. to 60 ft., Brook St. to Boundary Ave., Brays Bayou south through residential and downtown business district, across Buffalo Bayou and through Fifth Ward to Boundary St. and extending 7 mi.; approved recommendation of S. A. Starkey, Street and Bridge Commr., for graveling Harvard St.; agreed to gravel Conti St., Schwartz to Hill Ave.

Tex., Houston—City, W. E. Monteith, Mayor, has low bid from Gulf Bitulithic Co., 2820 Polk St., at \$18,326 for 2-in. asphalt over 6-in. conc. base, at \$23,194 on brick surface, Chenevert St.

Tex., Sinton—San Patricio County Comrs., J. M. Winfrey, County Engr., opens bids Oct. 11 for 7.2 mi. grading, draining, Odem-Edney road.

Virginia—State Dept. of Highways, C. S. Mullen, Ch. Engr., Richmond, opens bids Oct. 14 for 3 roads and 3 bridges: Surry-Prince George Counties—widening 20-ft. bridge, 1500 lb. rein. steel; Norfolk County—1.4 mi. conc., Portsmouth to 1.4 mi. west, 7511 cu. yd. excavation; Prince George County—widening 2 bridges over Powell Creek, 19,763 cu. yd. conc.; Princess Anne County—3 mi. conc., Virginia Beach to 3 mi. west, 5031 cu. ft. excavation; Nansemond County—3.8 mi. conc. or macad., Alexanders Corner to Bowers Hill, 21,114 cu. yd. excavation, 9276 lb. rein. steel, 3000 lin. ft. piling.

Va., Arlington—Ch., Bureau of Yards and Docks, Navy Dept., Washington, D. C.—Bids Oct. 8 for conc. walks, cinder roads, wire fence and grading, naval radio station.

West Virginia—State Road Comsn., George E. White, Sec., Charleston, has low bids for 11 roads and 4 bridge projects: Berkeley-Jefferson Counties—15 mi. stone base widening and retreat surface, Martinsburg-Charles Town road, Brady Bros., 12 Welsh St., Frostburg, Md., \$126,192; Doddridge County—0.93 mi. grading, conc. paving, Northwestern Turnpike, A. Shuttle & Co., Fairmont, \$48,351; 2.4 mi. grading, conc. paving, Northwestern Turnpike, A. Shuttle & Co., company, \$68,303; 5.25 miles grading, draining, West Union-Troy road, Hope Construction Company, Louisa, Ky., \$90,430; Jackson County—12.5 mi. grading, draining, Ripley-Spencer road, Yost Construction Co., Wabash Bldg., Pittsburgh, Pa., \$275,308; Greenbrier County—Rainelle-Rupert road, 3 culverts and approaches, Clark & Lewis, Luray, Va., \$16,020; Lincoln County—6 mi. grading, draining, Yawkey-Alum Creek road, Adkins & Black, Myra, \$127,794; Hancock County—4 mi. grading, draining, New Cumberland-Chester road, Robert J. Bure Co., 1740 E. 12th St., Cleveland, Ohio, \$81,869; Monongalia County—3 mi. retreat surface, Grafton-Halleck-Morgantown road, C. V. Rector and R. F. Kihkham, 1634 B. Quarrier St., Charleston, \$11,668; Pocahontas County—5 mi. grading, stone base and retreat surface paving, Durbin-Randolph County Line road, F. C. Sammons Co., 414 11th St., Huntington, \$110,122; Monroe County—3.9 mi. shale surfacing, Sweet Springs-Virginia State Line road, R. W. Moore & Co., Staunton, Va., \$11,480; Taylor County—5.5 mi. grading, draining, Grafton-Halleck-Morgantown road, Bramham & Edwards, Clarksburg, \$91,841.

On Bridges: McDowell County—Upper Landgraf, Thompson & Evans, Barboursville, \$22,972; Ritchie County Laurel, A. B. Peraldo & Son, McFarlan, \$20,928; Oxbow, Starcher & Anglin, Buckhannon, \$19,985.

#### Contracts Awarded

Ala., Montgomery—City, W. A. Gunter, Mayor, let contract to McCalla & Kenan, Bell Bldg., at \$17,760, for paving S. Jackson St.; J. M. Garrett, City Engr.

Arkansas—State Highway Comsn., C. S. Christian, Engr., Little Rock, let contracts for 4 roads and bridge: Jefferson County—¾ mi. grading, draining, conc., Dollarway-Route No. 3 cutoff, State Highway No. 65 and 3. Job 2137, Sullivan, Long & Haggerty, Bessemer, Ala., \$68,375; ¾ mi. grading, draining, conc., Ohio St. connection, (Pine Bluff) road, State Highway 65, Job 2138, J. P. McNulty, Pine Bluff, \$8784; Crawford County—8 mi. grading, draining, conc., Mountainburg-North and South road, Highway 71, Job 4153, Sandy Hites Co., Warsaw, Mo., \$76,932; Lawrence County—7 mi. conc., Hoxie-Allica road, State Highway 67, Job 10148, J. B. McCrary Engineering Corp., Citizens & Southern Bank Bldg., Atlanta, Ga., \$51,672; Scott County—522 lin. ft. struc. steel bridge over Fourche River, Parkes-Gravelly road, Highway 28, Job 4155, Vincennes Bridge Co., Vincennes, Ind., \$8892.

Ark., Newport—City let contract to T. J. Jones and H. Brown, 507 W. Fourth St., North Little Rock, at \$41,870 for grading, paving 15 blocks; to J. Stanton, Iola, Kans., at \$46,340 for Third St., Improvement Dist. No. 14.



Ark., Pecan Point—Grasell Construction Co., Wilson, has contract for gravel, grading, drainage, culverts; \$50,000; O. M. Fairly, Engr., Osceola.

Ga., Rome—City Comsn. let contract to O. D. Mingee, Rome, at \$17,200 for conc. paving, Sixth Ave.

Ga., Hogansville, City, C. T. Hightower, Clk., let contract to Way Construction Co., Valdosta, at about 24,000 for 0.5 mi. street and sidewalk paving. 9-18

Kentucky — State Highway Dept., H. D. Palmore, Engr., Frankfort, let contract to N. E. Stone Co., Madisonville, at \$230,000, for 13.162 mi. conc., U. S. Highway 60, Marlon to Union County line. 9-18

La., New Orleans—City let contract to Globe Construction Co., Louisiana Bldg., at \$28,360, for conc. sidewalks, Lafitte Ave., Sophia Wright Pl., Octavia and N. Robertson St.

Md., Towson—Baltimore County Comms., Samuel A. Green, Roads Engr., let contract to F. D. Carozza & Son, 2444 N. Charles St., Baltimore, at \$31,247 for 0.92 mi. conc. paving, Group 9, Seminary Ave. 8-28

Miss., Leland—Fowler Construction Co., Hattiesburg, has contract for sidewalks.

Mo., Kirkwood—City, Bd. of Aldermen, let contracts for paving: Rose Hill Ave., 20-ft. conc., W. C. Muncely Co., \$16,848; alley between Jefferson Ave. and Argonne Dr., 14-ft. conc., W. C. Muncely Co., \$1499; Woodbine Ave., 18-ft. conc., Carlson Construction Co., \$8399.

Mo., University City—City, E. L. Bruns, Clk., let contract to Webb-Boone Paving Co., 5103 Fryer Ave., St. Louis, for rein. conc. paving 1500 sq. yd. Julian Ave., \$3934; E. Fehlig & Co., Inc., 14 S. Central Ave., Clayton, 2300 sq. yd. Bartmer St., \$5629; 1480 sq. yd. Jackson Ave., \$3730; 3530 sq. yd. Chamberlain St., \$8390.

Okla., Muskogee—Dir. of U. S. Veterans' Bureau, Construction Div., L. H. Tripp, Ch., Arlington Bldg., Washington, D. C., let contract to Hogle & March, Muskogee, for paving road, U. S. Veterans' Hospital. 8-7

Tenn., Nashville—City, Hilary E. Howse, Mayor, let contract to Clayton Paving Co., Hill Bldg., at \$8445 for paving Seventh Ave.; to Eller & Olsen, Cotton States Bldg., for widening, rebuilding Dallas Ave., at \$9759, Gay St., \$12,021, Petway St., \$5351. 8-21

Tex., Fort Worth—Tarrant County Comms. Court let contract to West Texas Construction Co., 501 E. Rosedale St., at \$46,037, for 2 mi. paving, Highway 15, north of river route to Dallas.

Tex., San Antonio — City, Paul Steffler, Street Commr., let contract to Alamo Paving Co., 321 Dawson St., for 1½-in. cold rock asphalt topping on macad. base, 27-ft. roadway, Shook Ave. 9-25

Tex., Waco—McLennan County, H. B. Stanford, Judge, let contract to McCall Engineering Co., Amicable Bldg., Waco, for grading and small drainage structures, and to J. E. Johnson Construction Co., 1000 Franklin Ave., Waco, for large bridges, Fed. Aid Proj. 614-A, Unit 1, 14.091 mi.; \$134,000.

W. Va., Wheeling—City, T. Y. Beckett, Mayor-Manager, let contract to H. L. Seabright Co., 43rd and McCulloch St., at \$22,929, for paving Warwood Ave.

### Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported

Ala., Montgomery—J. B. McCrary Co., 1408 C. & S. Bk. Bldg., Atlanta, Ga., has contract for extension to sewer system. 9-11

Ala., Montgomery—State Bd. of Education, reported, let contract to Hodgson-Jones Const. Co., N. Perry St., for water, storm and sanitary sewers and grading on grounds of State Teachers College for Colored; Olmstead Bros., Brookline, Mass., Landscape Engrs.; J. M. Garrett, City Engr.

Ala., Montgomery—City Comsn. ordered 8-in. lateral sanitary sewers constructed in 18 streets in Highland Park district; bids to be advertised soon, contracts let in Oct.

Ark., Hot Springs—Hot Springs Rotary Club, Hamp Williams, Chrmn., Sewage Disposal Committee, approved immediate construction for sewage disposal plants and formation of improvement district to finance work.

Ky., Ashland—City, W. C. Frallie, Mayor, opens bids Oct. 6 for sewage disposal plant. See Want Section—Bids Asked.

Ky., Hopkinsville—City has had survey completed by V. V. Long & Co., Bennie-Dillon Bldg., Nashville, Tenn., for 2 disposal plants and sewer; cost \$293,000. 6-26

Ky., Louisville—Cannell-Conrad Construction Co., Equitable Bldg., has contract for 2 sewer jobs, cost \$175,000.

La., Baton Rouge—City votes Oct. 21 on \$290,000 sewer bonds. 9-25

La., Independence—Town, Charles Anzalone, Mayor, plans voting Oct. 14 on proposition of issuing \$10,000 bonds for sanitary sewerage system in District No. 1.

La., New Orleans—F. D. King, New Orleans, reported, has contract at \$26,000 for 4166 ft. sub-drainage system in Camp and Octavia Sts.; H. P. and J. F. Egan, 307 Camp St., New Orleans, at \$26,220 for 4779 ft. sewers in North Galvez and North St., Patrick St.

Md., Baltimore—Bd. of Awards receives bids Oct. 15 for sewers, Brooklyn and Curtis Bay, Sanitary Cont. No. 222. See Want Section—Bids Asked. 9-25

Md., Baltimore—Bd. of Awards receives bids Oct. 8 for sanitary sewers and storm drains, Storm Water Cont., No. 156. See Want Section—Bids Asked.

Md., Baltimore — Gray Concrete Co., Thomasville, N. C., low bidder at \$55,000 for conc. pipe for sewer board.

Md., Baltimore—Catalano & Pecora Construction Co., Old Town Natl. Bank Bldg., has contract for Storm Water Contr. No. 153; N. Martell, 440 Vesta Ave., for Storm Water Contr. No. 155. 9-25

Miss., Sanatorium—Mississippi State Board of Health let contract to Harbert-Cargile Construction Co., Inc., 1105 Martin Bldg., Birmingham, Ala., at \$27,000 for sewerage treatment plant; install Imhoff tank, storage tank, sand filter, etc.; vit. clay pipe 8 to 12 in.; Fairbanks, Morse & Co., 1000 St. Charles St., New Orleans, La., has contract for pumps and motors. 8-14

Mo., Kansas City—Matthew S. Murray, Director of Public Works, have plans completed and will soon call for bids for 2 additional sections of Gillham Rd. storm sewers.

N. C., Charlotte—Tucker & Laxton, Independent Bldg., reported, low bidder at \$38,905 for construction sludge beds and installation of sand elimination machines at Sugar and Irwin Creek sewage disposal plants. 9-11

Okla., Oklahoma City—City, M. Peshek, Jr., Clk., reported, rejected bids for conc. pipe for sewers Highland Home Addition.

S. C., Greenville—J. E. Sirrine & Co., Engrs., 215 S. Main St., Greenville, advise plans for installation of sewers in sub districts are in a preliminary state and no work has been authorized and will not be until bonds are voted on by the districts. 9-25

Tex., Dallas—City construct sewer in Denver St.; let contract at \$31,000 to R. H. Dearing & Sons Co., Allen Bldg., for drilling well in Oak Cliff. 8-28

Tex., Dalhart—Stanton Construction Co. has contract for Chicago St. storm sewer.

Tex., Houston—Jeffrey Mfg. Co., 955 N. Fourth St., Columbus, Ohio, reported, has contract at \$12,675 for conveyor system, North Side sewage disposal plant. 9-14

Tex., Houston — Elder Construction Co., 4714 Jack St., has contract for storm sewer, N. Main St.

### Telephone Systems

Ga., Waycross—Western Union Telegraph Co. will occupy building being erected on Elizabeth St. by T. J. Darling, Contr.; L. B. Harrell, Owner.

Kentucky—James M. Cox, Pres., Gainesboro Telephone Co., Cookeville, Tenn., reported, has plans under way for consolidation of 8 Tennessee and Kentucky telephone companies controlled by Continental Telephone Co., 34th and Broadway, Kansas City, Mo.

La., New Orleans—Reinmann Const. Co., Maritime Bldg., reported, remodel WSBM radio station; Weiss, Dreyfous & Seifert, Architects, Maison Blanche Bldg.

Maryland—Chesapeake & Potomac Telephone Co., Baltimore, plans additional expenditure of \$793,000 in Maryland telephone extensions; work includes additional aerial cable extensions in Dundalk-Riverside central office area, Baltimore; pole line and circuits between Salisbury and Nanticoke;

replacement of toll and exchange poles in Queenstown central office district and Jarrettsville and Darlington areas; underground cable extensions Silver Spring.

Md., Silver Spring—Chesapeake & Potomac Telephone Co., Baltimore, plans expending \$13,750 for extension of underground cable system.

Okla., Wapanucka — Southwestern Bell Telephone Co., St. Louis, Mo., reported, has plans in progress for 1 story and basement repeater station.

Okla., Waynoka—Standard Telephone Co., 201 Myrick Bldg., Lubbock, Tex., let contract to G. E. Autry & Son, Enld, at \$11,000 for telephone exchange building; 67x145 ft., brick and tile stuccoed, hardwood and cement floors, rubberoid roof; Maurice Sasso, Archt., 201 Myrick Bldg., Lubbock; Ray F. Red, Constr. Engr., 201 Myrick Bldg., Lubbock, Tex.; Stromberg-Carlson Telephone Mfg. Co., Coca Cola Bldg., Kansas City, Mo., contractors for switchboard and complete central office equipment. See Want Section—Machinery and Supplies, Building Material and Equipment. 9-25

Tex., Fort Worth—R. F. Ball Construction Co., 806½ Taylor St., reported, has contract for 3 story building Third and Main Sts., for Western Union Telegraph Co.; cost \$100,000.

Tex., Haskell—Associated Telephone Utilities Co., 72 W. Adams St., Chicago, Ill., and Lubbock, reported, acquired Haskell Telephone Co.'s properties, including telephone exchange at Haskell, also properties at Bryon, Jedmy, Loving, Swenson, Megargel, Thalia, Aspermont, Crowell, Dundee, Benjamin, Goree, Holiday, Knox City, Mankins, Munday, Newcastle, Olney, Rule, Rochester, Sagerton, Seymour, Trockmorton, and Weinert.

Va., Richmond — Chesapeake & Potomac Telephone Co. of Virginia, reported, plans expending \$609,000 for improvements and extensions, including construction of out-of-town toll circuits connecting with Norfolk, Newport News, West Point, Gloucester, Fairfield and Varina.

### Textile Mills

Ga., Columbus—Williams Lumber Co., 13th St., reported, has contract for erection brick and steel addition to Eagle and Phenix Mills, Front Ave.; cost \$14,000.

Mo., St. Louis—Lowell Bleachery, Lowell, Mass., reported, announced removal of plant from Lowell to St. Louis, merging with present plant at St. Louis; will transfer some of New England mill equipment.

N. C., Graham—A. W. Niemer & Co., capital \$50,000, incorporated; A. W. Niemer, Graham; H. T. Baker, Charlotte.

N. C., Hemp—Pinehurst Silk Mills, Inc., capital \$200,000, chartered; J. Spencer Love, W. J. Carter.

N. C., High Point—Piedmont Hosiery Co., capital \$1,000,000, incorporated; Hoke V. Bullard, Owen Reese.

N. C., Winston-Salem—Chatham Mfg. Co., Chatham, reported, enlarge main plant by construction of 2 additional stories; cost of building, not including machinery, \$12,000; manufacture wool mixed blankets.

S. C., Taylor—Announcement made of plan of consolidation of Piedmont Print Works, Inc., Taylor, and Southern Bleachery, Inc., Taylor, and Rockland Finishing Co., Garnersville, New York, whereby Piedmont-Southern group will purchase good will and equipment of Rockland Co.; plans contemplate moving portion of Rockland machinery to Taylors; plan provides that combination will be effective through organization of new corporation, Southern Bleachery and Print Works, Inc.; stockholders of Southern Bleachery, Inc., and Piedmont Print Works, Inc., will exchange their stocks in old corporation for stocks in new corporation. 9-18

S. C., Travelers Rest — Brandon Corp., Pendleton Road, Greenville, reported, converting Renfrew Mill into finishing plant; install \$40,000 machinery; 200 looms formerly operated at Renfrew are being removed and installed in other units of Brandon Corp.

Va., Danville—Dan City Silk Mill, N. Main St., reported, install machinery in new unit for preparation of yarn for shuttles. 9-25

Va., Narrows — Mountain Hosiery Corp., capital \$50,000, incorporated; Herbert Saphir, 212 Westberry Court, Brooklyn, New York.

W. Va., Princeton — Princeton Hosiery Mills Co., Straley St., floating \$60,000 gold bonds, 7½ interest; proceeds to be used for expansion, etc.

## Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification

Arkansas—Municipal Telephone & Utilities Co., Pioneer Trust Bldg., Kansas City, Mo., reported, plans extending mains from Walnut Ridge to Hoxie; install distribution system at Hoxie and filtration plant at Walnut Ridge.

Ark., Bentonville — City, R. O. Pickens, Mayor, reported, plans \$35,000 water works improvements.

Ark., Siloam Springs—Illinois Water & Development Co., J. W. Sloan, Pres., 1524 E. 20th St., Tulsa, Okla., reported, will have hearing Oct. 20 before State Conservation Comsn., Oklahoma City, Okla., on application for permission to construct dam on Illinois River at intersection of State Highway No. 17 and Illinois River; will generate power for Siloam Springs. 8-14

Fla., Hollywood—City, C. W. Ten Eick, Acting City Mgr., advises bids received Sept. 17 were tabulated and later rejected; possibility that something will be done regarding works this year. 9-4

Ga., Columbus—Edgewood Water Co. incorporated; O. D. Edge, 9 12th St.; plans water works system for 600 acre subdivision, dam creek for water supply and pumping station; have 2 small pumping stations but plan large central station.

Ky., Paducah—City, Ernest Lackey, Mayor, will acquire Paducah Water Works Co. 8-28

Ky., Lexington—City, James O'Brien, Mayor, has tentative plans for improvements to proposed pipe line to Kentucky River; Paul Hansen, 6 N. Michigan Blvd., Chicago, Ill., Hydraulic Engr., laying 35,000 ft. of 20-in. pipe line from reservoir No. 4 to river; construct pumping station at river to deliver 4,000,000 gals. water daily; establish connection with existing pipe lines, etc.

La., Kenner—Following contractors estimating on water works improvements, bids opened Oct. 15: J. V. and R. T. Burkes, Inc., American Bank Bldg., New Orleans; Allied Contractors, Omaha, Neb.; Fuller Construction Co., 8117 Palmetto St., New Orleans; P. Olivier & Son, 114 Billo St., Lake Charles; Thomas Carey, 214 Pan-American Bank Bldg., New Orleans; O. M. Gwin Construction Co., 3505 Fern St., New Orleans. 9-18

La., Clinton—East Feliciana Parish reported, votes Oct. 14 on \$27,500 water works bonds.

Md., Frederick—Town voted to spend \$200,000 for municipal improvements including construction of 49,000,000 gal. reservoir on Tuscarora Creek and elevating dam of present reservoir on Fishing Creek, increasing capacity by 17,000,000 gal.

Md., Baltimore—J. A. Laporte Corp., 109 State St., Albany, New York, low bidder at \$996,732 for construction of Prettyboy dam, designed to impound 20,000,000 gal water in storage lake. 9-18

Miss., Goodman—Layne Central Co., Millsaps Bldg., Jackson, Miss., and Chelsea Ave., Memphis, Tenn., reported, has contract for 800 ft. deep well and turbine pump with motor; W. E. Caldwell Co., 200 E. Brandies St., Louisville, Ky., for 10,000 gal. storage tank on 80 ft. tower. 5-22

Miss., Long Beach—J. A. McCormick, Town Clk., receives bids Oct. 7 for 350 g.p.m. centrifugal pump direct connected to electric motor.

Miss., Marks—Town, E. L. Boudreau, Clk., receives bids Oct. 6 for furnishing 2-in. galv. water pipe.

Mo., Clarkton—City, A. V. Rice, Mayor, plans water works system; may vote on bonds; W. A. Fuller Co., Engrs., 2916 Shenandoah Ave., St. Louis.

Mo., Mountain Grove—City, C. H. Duvall, Engr., reported, soon call for bids for water works improvements; \$20,000 bonds available. 9-18

Okla., Anadarko—J. H. Kunkel, Engr., advises deep well water supply not contemplated, as lately noted. 9-25

Okla., Mangum—City votes Oct. 14 on \$105,000 water works bonds; drill 8 wells; double present capacity of plant; Harvey Lawrence, City Mgr. 8-21

Okla., Oklahoma City—C. E. Bretz, Supt. Oklahoma City Water Dept., advises no bonds voted and work only in preliminary stage of investigation in connection with proposed

\$6,000,000 addition to water works plant. 9-18  
Tenn., Johnson City—Southeastern Paving Co., Johnson City, reported, low bidder for material, labor and equipment for reservoir. 9-11

Tenn., Memphis—Fuller & McClintock, 170 Broadway, New York, Const. Engrs., and Thomas H. Allen, 65 McCall St., Memphis, associated, reported, engaged by Bd. of Water Commrs. to design and supervise construction of \$2,000,000 pumping station. 9-25

Tex., Beaumont—City received report from Hawley, Freese and Nichols, Capps Bldg., Fort Worth, for permanent solution of water problem; plan includes expending \$1,400,000; may vote on bonds. 9-18

Tex., Big Springs — City, J. B. Pickle, Mayor, let contract to Williams-Jacobson, Inc., Rule Bldg., Amarillo, at \$14,965 for extension to present reservoir, one 1,000,000 gal. and one 200,000 gal. conc. reservoir; V. R. Smitham, Engr. 9-4

Tex., Brownsville—City has complete plans for water purification plant, 4,000,000 gal. capacity; cost \$100,000; Morey & Morey, Engrs., Praetorian Bldg., Dallas. 9-11

Tex., Brownwood—See Drainage, Dredging and Irrigation.

Tex., Troup — Layne-Texas Co., Second Natl. Bank Bldg., Houston, reported, has contract for drilling deep water well.

W. Va., Glendale—Pennsylvania State Water Corp., Harrisburg, Pa., subsidiary of Community Water Service Corp., 149 W. 36th St., New York, reported, acquired Glendale Water Co., including pumping station and 250,000 gal. reservoir.

## Woodworking Plants

La., New Orleans—American Woodworking Corp., capital \$15,000, incorporated; Claude D. Miller, 4210 Bienville St.

Mo., St. Louis—Flexwood Co., 919 N. Michigan Ave., Chicago, Ill., advises construction of plant has been postponed to an indefinite future date. 9-25

N. C., Statesville—Morrison Furniture and Fixture Co., capital \$100,000, incorporated; W. B. Crowson, W. R. Byford; acquired and will operate plant of Morrison Mfg. Co.; manufacturing store and office fixtures.

S. C., Allendale—Santee Heading Corp., Clinton & Elm Sts., Lambertville, New Jersey, R. D. Morse, Plant Mgr., will rebuild burned plant; plans not yet completed; frame; conc. floors; metal roof; daily output 30,000 yellow pine heading. See Want Section—Machinery and Supplies and Building Material. 9-4

## FIRE DAMAGE

Ala., Tuskegee—One of two compartments of Farmers and Alliance Warehouse Co., owned and operated by Laskie & Preer Co.

Ark., Arkadelphia—Main building of Arkadelphia Baptist Academy; loss \$40,000.

Ark., Dumas—King Hotel owned by Mrs. Rachel Waterman, Lexington, Miss.; loss \$10,000.

D. C. Washington — Wilbur F. Nash's warehouse, First and L Sts., N. E., occupied by Hub Furniture Co.; loss \$18,000.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### Bank and Office

Ga., Adel—Southern Watermelon Growers Assn., J. J. Parrish, Pres., receives bids Oct. 3 for rein. conc., tile and brick office bldg.; \$60,000, 3 stories, 75x50 ft., terrazzo floors, conc. foundation, tile roof deck; Daniell & Beutell, Archts., Georgia Sav. Bank Bldg.; Robt. Fiske, Engr., Healey Bldg., both Atlanta; following contractors estimating: Norwood Griffin Co., Bona Allen Bldg.; A. K. Adams Co., 542 Plum St., N. W.; W. P. Francis, 201 Luckie St., N. W.; J. S. McCauley, Bona Allen Bldg.; Smith & Pew, 435 Irwin St., N. E.; Grahn Construction Co., Red Rock Bldg.; Geo. Spruill, Red Rock Bldg., all Atlanta, Ga.; Ledsinger & Turner, Brunswick, Ga.; Snellings Lumber Co., Phenix City, Ala.; R. N. McEachern, Douglas, Ga.; Daniel Lumber Co., LaGrange, Ga.; Brown & Adams; W. H. Spooner, both

Fla., Live Oak—Dwelling, White St., owned by Mrs. Carrie Bonnell; occupied by Bob Cason.

Fla., MacLennny—Residences of T. J. Nabb and B. J. Padgett.

Ga., Millen—Dr. G. L. Williams' residence.

Ky., Edmonton—William Morton's restaurant and dry goods store; Hall Van Zandt's store; loss \$20,000.

Ky., Louisville—Sack manufacturing plant of Gold Proof Milling Co., Inc., 1328 S. Fourteenth St.; loss \$20,000.

Ky., Mount Sterling—Perry Flora Garage and buildings of O. W. Coons Co., and Ensor Motor Co.

Md., Sharptown—Luther Lord's residence near Sharptown.

Md., Fairfield, Baltimore — Weyerhaeuser Lumber Co.'s sorting shed; loss \$100,000.

Md., Trappe—Dwelling, Todd's Point Farm near Trappe, occupied by Geo. Green; owned by Hughlett estate.

Mo., Centralia—Newspaper plant of Centralia Courier; loss \$25,000.

Mo., Kirksville—Princess Drug Store; Troester Clothing Store; Smith Sign Shop; loss \$40,000.

Mo., New Bloomfield—Dwelling owned by Dan Mayer, Chugwater, Wyo., occupied by Mrs. Geo. Repper.

Mo., Sikeston—Planing mill of Weltecke Lumber Co.

N. C., Albemarle—Albemarle Cabinet Co.'s plant, W. C. Russell, Prop.

N. C., Henderson—The Pollyanna, boarding house on Fifth Ave., owned by Hugh T. Bolin.

S. C., Union—Building, Main St., occupied by Poole Chevrolet Co.

Tenn., Nashville — Fruit plant of E. S. Hertzka, 705 Third Ave.; loss \$25,000.

Tex., Coleman — Walker Smith Grocery Store, Sam Knox, Mgr.

Tex., Honey Grove—Seed house and hull house of Honey Grove Cotton Oil Co.; loss \$125,000.

Tex., Jasper—Morgan Hotel owned by Alvin Morgan; loss \$10,000.

Tex., Roan—A. G. Smith's cotton gin; loss \$13,000.

Tex., San Angelo—Burton-Lingo Lumber Co.'s plant; loss \$35,000.

Va., Front Royal—John Hilliard's residence, S. Manor Ave.

Va., Warsaw—Marvin Grove Camp, owned by Methodist Episcopal Church, South, Louisville, Ky.; loss \$10,000.

Va., Winchester—Angerona, dwelling owned by Harry M. Sartelle; loss \$20,000.

W. Va., McComas—Coal preparation plant, dry cleaning plant and washer of American Coal Co.; loss \$200,000.

W. Va., Berkeley Springs—Berkely Glass Sand Co.'s plant; loss \$20,000.

W. Va., Keedysville—Cannery and packing house of Stehley Orchard, owned by Mrs. F. H. Stehley, Cumberland, Md.

W. Va., Parkersburg—Plant of White Star Laundry Co. on Sixteenth St.; loss \$30,000.

W. Va., Spencer—Planing mill and brick yard of Spencer Builders Supply Co.; loss \$20,000.

Tifton, Ga.; Barrett Construction Co., Dalton, Ga.; Newton Coal & Lumber Co., Griffin, Ga. 9-11

Ga., Savannah — Grace Methodist Church raising funds for building.

Tex., Houston—Texas Building Co., care Jesse H. Jones & Co., Gulf Bldg., erect \$1,250,200 United Gas Bldg., Walker Ave. and Travis St.; structure leased to United Gas Corp., Ralph B. Feagins, Pres.; 10 stories, 100x125 ft., foundation to carry 6 additional stories; United Pipe Line Corp., N. C. McGowen, Pres.-Gen. Mgr., member of United Gas system; A. C. Finn, Archt., Bankers Mortgage Bldg.

Tex., Galveston—American Indemnity Co., 2526 B St., purchased bldg.; remodel.

Tex., Dallas—Dallas Gas Co., 2016 Jackson St., have plans for superstructure completed



in about 1 week; \$900,000, 9 stories and basement, with foundation to carry 23 stories, brick, steel, stone and rein. conc.; Lang & Witchell, Archts., First Natl. Bk. Bldg.; Gardner & Howe, Struct. Engrs., Kirby Bldg.; contract for excavation and foundation previously let to Dallas Transportation Co., 817 Bourbon St.; struct. steel lately noted let.

8-21  
Tex., Liberty—First National Bank having plans drawn for \$50,000 bank building.

### Churches

Ark., Prairie Grove—Methodist Episcopal Church remodel bldg. and erect Sunday school addition; \$10,000; conc., brick and tile, 2 stories, 34x65.4 ft., wood and cement or linoleum floors, conc. foundation, built-up asphalt roof; Jas. Dinwiddie, Archt., Fayetteville; date of bids not determined. 9-25

Ark., Tuckerman—Methodist Church, Rev. W. W. Albright, Pastor, plans \$30,000 bldg.; brick, 2 stories, 85x85 ft., wood floors, misc. steel and iron work, comp. built-up roof; H. Ray Burks, Archt., Wallace Bldg., Little Rock; plans drawn; raising funds.

Ga., Moultrie—Presbyterian Church opens bids Oct. 27 for \$10,000 brick and tile Sunday school; 2 stories, 54x85 ft., conc. foundation, built-up roof; T. F. Lockwood, Archt., Murrah Bldg., Columbus. 7-17

La., Baton Rouge—Istrouma Baptist Church, Dr. S. G. Morris, Chmn., Bldg. Comm., plans to start work about Jan. 1 on \$40,000 bldg.; plans by Sunday school Bd. of Southern Baptist Convention, Nashville, Tenn. 4-24

La., New Orleans—Alex W. Norman, Archt., Maritime Bldg., will receive revised bids from Geo. J. Glover Co., Inc., Whitney Bldg., for chapel, Algiers; plans ready in about 1 week. 7-31

Md., Baltimore—St. Luke's Evangelical Church, Rev. J. Wilbur Drawbaugh, Pastor, 506 W. 36th St., having plans drawn by Richter & Eiler, Archts., Reading, Pa., for \$75,000 Sunday school, 36th and Chestnut Sts.; stone, 2 stories; may call for bids in Spring.

Md., Baltimore—St. Bartholomews P. E. Church, Rev. T. N. Barth, Rector, Edmondson Ave., Ten Hills, having plans drawn by Mottu & White, Archts., 527 N. Charles St., for \$80,000 to \$90,000 bldg.; stone, 1 story; plans probably ready in about 2 months.

N. C., Durham—Methodist Church, care C. M. Fuller, erect Duke Memorial Sunday school; brick and steel, 2 stories and basement, limestone trim, steel sash, tile and granite work, Spanish tile and built-up roof; Nelson & Cooper, Archts., 126½ S. Salisbury St., Raleigh; bids Oct. 1.

Tenn., Memphis—St. Johns P. E. Church, Rev. Alfred Leaning-Clark, Rector, start work within year on \$60,000 first unit of \$250,000 bldg., site present structure, Speed St. and Spottswood Ave.; brick or stone; to select architect when financing is arranged.

Tenn., Nashville—National Ave. Baptist Church, National Ave., Rev. Frank Stamps, Pastor, plans bldg.; possible location Macon Rd. and May Ave.

Tex., Nacogdoches—First Baptist Church, Rev. Bennie Grimes, Pastor, ready for bids for \$20,000 Sunday school; Shirley Simons, Archt.

Tex., Palestine—First Baptist Church, Rev. Calvin Nelson, Pastor, have plans completed about Oct. 6 for brick veneer Sunday school; 3 stories, 50x70 ft., built-up roof; Will N. Noonan Co., Archt., Builders Exch. Bldg., San Antonio.

Tex., San Benito—First Methodist Church, Rev. C. E. Marshall, Pastor, receives bids October 6 for face brick veneer, struct. clay tile and rein. conc. church; steel frame, copper roof; separate bids for plumbing, heating and wiring; Robt. L. Vogler, Archt., Engr., Edinburg. 6-26

Va., Clifffield—Bd. of Church Extension, M. E. Church, South, 1115 Fourth Ave., Louisville, Ky., drawing plans for small country church.

W. Va., Parkersburg—Phelps Memorial Church; W. F. Miller, Archt., Citizens Bk. Bldg., advises contract not let and nothing will be done until Spring.

### City and County

Ark., Wynne—Cross County Bd. of Comms., C. M. Stacy, County Judge, has plans by Estes W. Mann, Archt., Cotton Exch. Bldg., Memphis, Tenn., to remodel courthouse and erect additional story; new basement, heating plant; vote at Nov. election. 9-11

La., Hahnville—St. Charles Parish Police Jury called special election Nov. 6 on \$100,000 jail bonds; fireproof, rein. conc., brick and steel, 3 stories; Wm. R. Burk, Archt., Balter Bldg., New Orleans. 9-11

Md., Baltimore—Following contractors estimating on alterations to engine house No. 44 and erection of 3 hose towers, total \$24,000; John H. Sier, 3705 Chatham Road; David M. Andrews Co., 26th & Sisson St.; Benj. Klayman, 17 Guilford Ave.; Tase-Norris Co., Inc., 903 Cathedral St.; T. F. Watts, 213 Mt. Royal Terrace; C. H. Henkal, 2740 Edmondson Ave.; C. W. Schmidt, Hearst Tower Bldg.; Det'ou & Chidlau, Eutaw & Biddle Sts.; E. J. Wunder, 4312 Belvue Ave.; Avon Construction Co., 216 E. Lexington St.; Henry L. Maass & Sons, on horse towers; O. Eugene Adams, Archt., 1119 Emsor St., is additional firm estimating 229 N. Charles St. 9-25

Okla., Chandler—Lincoln County Bd. of Comms. erect \$25,000 jail; brick, 2 stories and basement; preliminary plans.

Okla., Stilwell—Adair County Bd. of Comms., S. J. Starr, Jr., Clk., having plans drawn by Huseman Co., Chickasha, for \$100,000 courthouse; brick and rein. conc., 3 stories. 8-21

Tex., Cotulla—LaSalle County Bd. of Comms., Geo. Welhausen, County Judge, having plans drawn by Henry T. Phelps, Archt., Hicks Bldg., San Antonio, for \$150,000 courthouse; rein. conc., brick, tile, marble, stone, 4 stories and basement, jail on top floor; bond election Oct. 18.

Tex., Dumas—Moore County Bd. of Comms. approved plans for \$150,000 courthouse; receiving bids; fireproof, brick and terra cotta, 3 stories, oak interior trim, terrazzo floors, marble wainscoting. 7-10

Tex., Liberty—Liberty County Bd. of Comms., C. R. Wilson, County Judge, opens bids Oct. 20 for courthouse after plans by Corneil G. Curtis, Archt., 1628 Hawthorne St., Houston; \$250,000, brick, stone, steel and rein. conc., 3 stories. 9-25

Tex., New Braunfels—Comal County Bd. of Comms. has low bid at \$39,995 from J. J. Wattling, Scarbrough Bldg., Austin, to remodel courthouse and erect jail; Jeremiah Schmidt, Archt., New Braunfels; W. E. Simpson Co., Engr., Milam Bldg., San Antonio.

Tex., LaPorte—City Council has plans completed for city hall and fire station; brick veneer, 2 stories; J. H. Rafferty, Consult. Engr., Marine Bank Bldg., Houston.

Va., Roanoke—City Council probably expend about \$13,000 to remodel jail.

### Dwellings

Ala., Tuscaloosa—Gordon Palmer erect brick veneer residence, Druid Court; 2 stories, 30x50 ft., comp. roof, steam or furnace heat; Miller & Martin, Archts., Title Guar. Bldg., Birmingham; bids in.

D. C., Washington—C. A. Wolfe, 110 Cernum St., N. W., erect residence, 3516 Thirteenth St., N. E.; Sears, Roebuck & Co., Archts., 911 Bladenburg Road, N. E.

Fla., Miami—Chas. S. Boyd, care Appleton Coated Paper Co., Appleton, Wis., receives bids Oct. 6 for \$70,000 residence, garage, servants' quarters, etc., S. Bayshore Drive; Walter C. DeGarmo and Thos. A. Bruno, Archts., 39 S. E. Sixth St., Miami; structure conc., brick, terra cotta tile, rein. conc. floor slabs, wood or terra cotta partitions, tile floors and roof, orna. iron, cast stone, oil burner; following contractors invited to estimate: Chas. B. Colby & Sons, Inc., 3081 Day Ave., Coconut Grove; John B. Orr, Inc., N. E. Sixth St.; Gunn & Goll, Inc., 69 N. E. 36th St.; St. John Construction Co., 629 N. W. Seventh St.; R. G. Witters Co., 1745 S. W. Sixth, all Miami. 4-17

Fla., Winter Haven—Tilden & McMichael, 142 Central Arcade, drawing preliminary plans for \$15,000 dwelling; tile and stucco, 2 stories, 60x32 ft., hardwood floors, comp. roof, gas heat.

Ga., Manchester—J. S. Peters receives bids about Oct. 10 for brick veneer residence; 2 stories and basement, 10 rooms, 2 baths, hardwood and tile floors, conc. footings, slate roof; Smith & Biggers, Archts., Murrah Bldg., Columbus.

Md., Baltimore—Robt. Forbes, 723 E. 31st St., erect \$10,000 dwelling, 205 Taplow Rd.; brick, 2 stories.

Okla., Oklahoma City—Dr. F. P. Harrell probably call for bids during Oct. for \$15,000 residence; brick veneer, 2 stories, 30x58 ft.; Schumacher & Winkler, Archts. 8-7

Okla., Oklahoma City—L. T. Hill, 10 E. 10th St., erect \$30,000 residence; brick veneer, stone and stucco, 2 stories and basement; Schumacher & Winkler, Archts.; drawing plans.

Okla., Tulsa—Bruce Heralton erect \$20,000 residence; brick and stone veneer, 2 stories and basement, 45x90 ft.; Ross B. Baze, Archt., Hunt Bldg.; drawing plans.

Tenn., Memphis—Mike Ciancolo, 516 Vance Ave., brick and stone residence, Jackson and Evergreen Sts.; 1 story, hardwood floors,

tile bath, comp. roof, hot water heat; Claude Northern, Archt., Fidelity Bk. Bldg.

Tenn., Memphis—Dr. A. R. Bliss, 874 Union Ave., erect stucco residence, Chickasaw Gardens; 1½ stories, 75x35 ft., tile roof, hardwood floors, 2 tile baths; Jones & Furbringer, Archts., Porter Bldg.

Tenn., Nashville—W. P. Kirkham, 429 Commerce St., erect brick veneer residence, Hobbs Lane; 46x65 ft., 2 stories and basement; Warfield & Keeble, Archts., Nashville Tr. Bldg.; soon ready for bids.

Tenn., Nashville—J. H. Lawson, 1043 W. Eastland Ave., erect \$15,000 native stone residence, Main St. and N. Fifth St.; 2 stories and basement; Warfield & Keeble, Archts., Nashville Tr. Bldg.

Tenn., Nashville—R. E. Martin, Cotton States Bldg., erect native stone residence, Hillsboro Rd.; 2 stories and basement; Warfield & Keeble, Archts., Nashville Tr. Bldg.

Tex., Austin—Miss Vita Harmon, 5034 31½ St., erect brick veneer residence; 1 and 2 stories, rein. conc. foundation; Page Bros., Archts., Austin Natl. Bk. Bldg.; bids Sept. 29.

Tex., Beeville—W. J. Fox erect \$12,000 brick veneer residence; 1 story; Albert H. Howze, Esperson Bldg., and Jas. I. Campbell, both Houston, Archts.

Tex., Houston—J. M. Edel, Cotton Exchange Bldg., erect brick veneer residence, Braeswood; 2 stories; Louis P. Josseland, Archt., First Natl. Bank Bldg., Houston.

Tex., Liberty—Roman Catholic Church has plans completed for brick veneer rectory; J. M. Glover, Archt., Bankers Mortgage Bldg., Houston.

Tex., San Antonio—Richard Vander Straten, Archt., Travis Bldg., receiving bids for struct. clay tile and stucco residence, Terrell Hills; 2 stories, conc. foundation, metal lath; W. E. Simpson & Co., Engrs., Milam Bldg.

### Government and State

D. C., Washington—District Comms., Room 509, Dist. Bldg., received bids Sept. 29 for model of proposed Municipal Center bounded by Louisiana Ave. E St. and Indiana Ave., Third and Fourth Sts., Pennsylvania Ave. and Fifth and Sixth Sts., N. W.; specifications from Room 427. 11-7-29

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., selected Waddy B. Wood, 16 Jackson Place, N. W., as architect to remodel State, War and Navy Bldg.; \$3,000,000 appropriation available; replace exterior, refinish and change interior.

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., having plans drawn by Delano & Aldrich, Archts., 126 E. 38th St., New York, for bldg. for Post Office Dept., to be erected in the Triangle; steel frame, fireproof, stone exterior, 7 stories and basement, 108,000 sq. ft. ground area, 14,000,000 cu. ft.; metal window frames and sash and interior doors and trim; sanitary, lighting, heating and ventilating equipment; easterly facade on 12th St. curved to form 1 side of circular plaza; westerly facade also curved; work probably start on site in near future.

Ga., Atlanta—Federal Penitentiary, H. F. Frick, Ch. Clk., erect \$60,000 dormitory, Honor Farm, Panthersville; rein. conc., 2 stories and basement, comp. roof; drawing plans. 9-25

Ky., Frankfort—State Bd. of Charities and Corrections authorized J. C. Bird, Commr. of Public Institutions, to advertise for bids to remodel Reformatory after plans by Churchill & Gillig, Archts., Fayette Bank Bldg., Lexington; \$1,198,670, including \$660,000 for cell house to accommodate 700; State Bd. also plans to purchase 2000-acre tract for prison farm, using prison labor in bldg. constr. work; funds to be derived from existing tax.

Miss., Stoneville—Delta Experiment Station, W. E. Myres, Director, receives bids until Oct. 15 for office and laboratory bldg.; \$37,500, fireproof, rein. conc., brick, 4 stories, 42x118 ft., wood and conc. floors, conc. foundation, built-up roof, struct. steel and iron, steel sash, sheet metal work; W. A. Stanton, Archt.-Engr., First Natl. Bk. Bldg., Vicksburg. 9-18

Okla., Oklahoma City—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., probably call for bids within 3 weeks for \$1,100,000 addition to Federal bldg.; also call for bids in about 1 week for Capitol Hill post office sub-station. 7-24

S. C., Charleston—United States Public Health Service, Hugh Cumming, Surgeon General, Washington, plans number improvements, Fort Johnson Quarantine Station; includes hospital, increased detention facilities, landlocked basin, quarters for Dr. C. M. Fauntleroy, Medical Officer in Charge, additional wharf and probably power connections

with City; \$100,000; receiving bids for cutting canal and for dredging work; U. S. Coast Guard has contract to laying telephone cable from Fort Johnson to Fort Moultrie.

S. C., Parris Island—Constructing Quartermaster, U. S. Marine Corps, receives bids Oct. 15 for alterations to 5 bldgs.; following contractors estimating: W. P. Francis, 200 Luckie St., Atlanta, Ga.; M. W. Galvin Co., Lowell, Mass.; Southern Construction Co., 1394 Gwinnett St., Augusta, Ga.; Fanning & Sweeney, Inc., Jefferson Bldg., Greensboro, N. C.; Simons-Mayrant Co., Peoples Office Bldg.; M. L. Stephenson, 273 E. Bay St., both Charleston, S. C.; James Ferry & Co., Inc., Virginia and Mediterranean Aves., Atlantic City, N. J.; R. J. Whalley, Inc., 404 E. Bay St., Savannah, Ga.; Keenan & Graves, 118 Preston Ave., Charlottesville, Va.; J. J. Boling, Pineora, Ga.; Theriault Contracting Co., 534 E. Johnson St., Philadelphia, Pa.; Crane Co., 1225 Eye St., N. W., Washington.

Tex., Randolph Field—Constructing Quartermaster, Capt. A. W. Parker, receives bids Oct. 20 for post exchange and for 2 bachelor officers' quarters and bachelor officers' dining hall; exchange masonry, Spanish or Mission type, 1 story, irregular shape, 3 wings 40x70 ft. with connecting patio; Robt. B. Kelly, Archt., Milam Bldg.; Matthews & Kenan, Engrs., Smith-Young Tower; officers' quarters and dining hall rein. conc., tile and stucco, 2 stories and part basement, tile roof; Phelps & DeWees, Archts., Gunter Bldg.; W. E. Simpson & Co., Engrs., Milam Bldg., all San Antonio. 8-21

Tex., Randolph Field—Signal Officer, Lt. Col. Walter E. Prosser, Fort Sam Houston, receives bids in triplicate until Oct. 24 for underground telephone conduit system, Randolph Field; plans seen at Signal Office, Eighth Corps Area, Fort Sam Houston; 19,805 lin. ft. clay duct, 87 manholes, 38,500 lin. ft. creosoted wood duct, 38 fire telephone supports.

Tex., Randolph Field—Constructing Quartermaster, Capt. A. W. Parker, has low bid at \$71,641 from C. A. Anderson Co., 1026 Avant St., San Antonio, for storm sewer system, Randolph Field. 9-18

Tex., San Antonio—Machine Gun Troop, 124th Cavalry, National Guard, care Capt. A. F. Marcias, Fort Sam Houston, selected Ralph H. Cameron, Majestic Bldg., as architect for armory and stables, International Exposition Grounds; financing not completed. 9-11

Tex., Sugarland—State Bd. of Control, Pur. Div., Austin, opens bids Oct. 6 for materials for warehouse and canning plant, Imperial Prison Farm near Sugarland; cement, sand, gravel, lumber, rein. and struct. steel, steel rolling doors, corrugated asbestos or corrugated iron siding, etc.; Giesecke & Harris, Archts., Norwood Bldg., Austin; constr. by prisoners. 9-11

Va., Hampton Roads, Norfolk—Navy Dept., Bureau of Yards and Docks, Washington, D. C., expects to call for bids early in Oct. for \$600,000 first unit of bldgs., Hampton Roads Naval Training Station; Capt. Walter H. Allen, Public Works Officer of Fifth Naval District, Hampton Roads. 7-17

Va., Quantico—Additional firms estimating on 4 barrack bldgs., bids Oct. 15 by Navy Dept., Bureau of Yards and Docks, Washington, D. C.; Henry B. Ryan Co., 500 N. Dearborn St., Chicago, Ill.; Virginia Bridge & Iron Co., Drawer 925, Roanoke, Va.; V. L. Nicholson Co., P. O. Box 661, Knoxville, Tenn.; N. C. Nelson, 853 Broadway, New York; J. A. Gardner, 211½ Tryon St., Charlotte, N. C.; Greenwood Electrical Co., 4849 Chestnut St.; Theriault Contracting Co., 534 E. Johnson St., both Philadelphia, Pa.; Batson-Cook Co., Inc., West Point, Ga.; David Bros., 1716 Summit Ave., Richmond, Va.; A. K. Adams & Co., 542 Plum St., N. W., Atlanta, Ga.; Edw. S. Moore & Son, 610 N. Washington St., Kokomo, Ind. 9-25

### Hospitals, Sanitariums, Etc.

Ala., Mobile—City enlarge city hospital; will not vote on bonds as previously considered; details not determined. 7-17

Ga., Tooeba—Stephens County Bd. of Commrs., R. L. Elrod, Chmn., plans \$60,000 hospital; may authorize bonds at Nov. 4 election; hospital not contemplated at this time.

La., Alexandria—Addition contractors estimating on garage, U. S. Veterans Hospital for U. S. Veterans Bureau, Arlington Bldg., Washington, D. C., bids Oct. 7; Geo. G. Scallon, P. O. Box 1664; C. M. Waters, Inc., Harris St., both Alexandria, La.; E. G. Lawley, Jr., 1418 25th Ave., Gulfport, Miss.; A. J. Rife Construction Co., 1913 N. Harwood St., Dallas, Tex. 9-25

La., Baton Rouge—Louisiana Tuberculosis League receives bids Oct. 30 at office Louisiana State Bd. of Health, New Courthouse

Bldg., New Orleans, for sanatorium, Greenwell Springs, 16 miles from Baton Rouge; frame and stucco, 2 stories, 40x200 ft., asbestos wallboard, asbestos shingle roof, steel lockers; M. B. DePass, Archt., 926 Pauline St., New Orleans.

Md., Baltimore—Children's Hospital School, Greenspring Ave. and 41st St., Dr. W. S. Baer, 4 E. Madison St., interested, having preliminary plans drawn by Buckler & Fenhagen, Archts., 325 N. Charles St., for \$175,000 hospital bldg.; brick, stone, 2 stories.

Md., Baltimore—Philip Blum, Calvert Bldg., alter and erect addition for veterinary hospital, 2651 Pennsylvania Ave.; leased to Wm. T. Smothers, 2649 Pennsylvania; brick, 2 stories.

Mo., Excelsior Springs—United States Veterans' Bureau, Arlington Bldg., Washington, D. C., has low bid at \$40,000 from A. W. Ferrell, 104 Fifth Ave., Huntington, W. Va., for officers' duplex quarters, including roads, walks, etc., U. S. Veterans Hospital. 9-18

Okla., Muskogee—United States Veterans Bureau, Arlington Bldg., Washington, D. C., has low bid for \$10,000 Zeolite water softening system, U. S. Veterans Bureau, from Elgin Softener Corp., Elgin, Ill.

Tenn., Memphis—Dr. L. A. West, 149 Beale St., interested in erection of hospital for negroes.

Tex., El Paso—City of El Paso and El Paso County will vote on \$400,000 city-county hospital bonds; structure fireproof, about 150 beds; Trost & Trost, Archts., Two Republics Bldg. 8-28

Tex., Houston—Dr. Herman W. Johnson and Dr. Robt. A. Johnson, both Medical Arts Bldg., purchased site, Fannin St. and Eagle Ave.; may erect obstetrical clinic.

### Hotels and Apartments

D. C., Washington—T. J. Skillman, Ch. Engr., Pennsylvania R. R., Broad Street Station Bldg., Philadelphia, advises that the Pennsylvania R. R. does not plan erection of \$2,000,000 hotel and bus terminal as recently reported. 9-25

Fla., Miami Beach—Mayflower Hotel, Samuel Kantor, 1702 Alton Road, remodel and erect 23-room addition; Frank Wyatt Woods, Archt., Ingraham Bldg., Miami.

Fla., Orlando—Orange Court Hotel, Wm. C. Atkinson, Mgr., remodel and refinish hotel which will be known as Colonial Orange Court.

Ga., Atlanta—Fitzhugh Knox & Son, Norris Bldg., rebuild apartment, 1420 Peachtree St., recently destroyed by fire at loss \$125,000; 3 stories, brick, comp. roof.

Ga., Macon—Hotel Dempsey, Herbert M. Block, has low bid from Angle-Blackford Co., American Natl. Bank Bldg., Greensboro, N. C., for \$375,000, 12-story and basement, 50x75 ft., rein. conc., steel, brick and tile, 200-room addition; tar and gravel roof, stone trim, tile and terrazzo floors; W. L. Stoddart, Archt., 50 E. 41st St., New York. 9-18

Mo., Cape Girardeau—P. T. Boles purchased Hotel Idan-Ha and remodel.

Tex., Dallas—Mrs. I. T. Townsend, 3512 Gillespie St., erect \$20,000, brick veneer, 12-apartment, 5849 Oram St.

Tex., Marlin—Commonwealth Bank & Trust Co., San Antonio, plans \$75,000 improvements to Arlington Hotel.

Tex., Port Isabel—Baker Hotel, Inc., 1400 Commerce St., Dallas, reported, planning erection of \$500,000, 12-story hotel.

### Miscellaneous

Md., Baltimore—Associated Jewish Charities, H. Greenstein, Executive Dir., 205 W. Lombard St., having plans prepared by office of Joseph Evans Sperry, Calvert Bldg., for \$50,000, 3-story, brick administration building on W. Monument St.

Md., Mount Washington, Baltimore—Methodist Episcopal Home for Aged, Geo. R. Bullen, Chmn. Bldg. Comm., 619 W. Franklin St., Baltimore, receives bids Oct. 11 for \$500,000, brick, fireproof building, Rogers and Greenspring Aves.; accommodate 175 people; O. Eugene Adams, Archt., 329 N. Charles St.; Henry Adams, Inc., Mech. Engr., Calvert Bldg.; Herman F. Doeleman Struc. Engr., Baltimore Trust Bldg.; following contractors estimating: Benj. F. Bennett Building Co., 123 S. Howard St.; Tase-Norris Co., Inc., 903 Cathedral St.; Morrow Bros., Inc., Fidelity Bldg.; Consolidated Engineering Co., 20 E. Franklin St.; Frairie Bros. & Haigley, 19 W. Franklin St.; M. A. Long Co., 10 W. Chase St.; Thomas Hicks & Sons, Inc., Charles St. and Stratford Road, all Baltimore. 9-18

Mo., St. Louis—Ziegenhein Bros. Livery & Undertaking Co., 2623 Cherokee St., erect 2-story, basement and tower, 106x89 ft., brick funeral parlor and chapel, Gravois Ave. and

Kings Drive; T. P. Barnett Co., Archt., Arcade Bldg.; Taxis & Becker, Consult. Engrs., Chemical Bldg.; bids in.

N. C., Charlotte—Charlotte Country Club, H. M. Wade, Pres., selected Aymar Embury 2d, 150 E. 61st St., New York, to prepare plans for \$150,000 clubhouse.

N. C., Winston-Salem—Methodist Children's Home, O. V. Woolsey, Supt., Reynold Road, erect cottage to accommodate 25 children.

Tenn., Maryville—Mrs. A. K. Harper erect Memorial Library, College and Church Sts.; plans drawn.

Tex., Dalhart—Dalhart Business and Professional Women's Club promoting erection of community auditorium.

Tex., San Antonio—Longhorn Amusement Park, Inc., K. Crossland, Pres., conception Road and Mitchell St., erect 1-story, frame sport stadium; seat 7500 people; ready for bids about Oct. 14; Phelps & Dewees, Archts., Gunter Bldg.

### Railway Stations, Sheds, Etc.

Tex., Houston—Southern Pacific Ry. Co., R. W. Barnes, Ch. Engr., S. P. Bldg., postponed erection of \$2,000,000 passenger station until 1931; Wyatt C. Hedrick, Inc., Archt., First Natl. Bank Bldg., Fort Worth. 6-26

### Schools

Ala., Tuskegee—Tuskegee Institute, R. R. Moton, Prin., has low bid at \$263,000 from T. C. Windham & Sons, 1620 Fourth Ave., N. Birmingham, for 2-story and basement, 177x188 ft., rein. conc. and steel, brick and tile auditorium-gymnasium; reported that T. C. Windham & Sons will refigure and probably be awarded contract in few days; Taylor & Persley, Archts., Tuskegee Institute. 9-11

Ark., Alix—Six school districts in East Franklin and West Johnson counties are considering consolidating and erecting \$75,000 high school near Alix; address Franklin County Bd. of Education, Ozark.

Ark., Hope—School Bd. selected Petter & McAninch, Inc., Pyramid Life Bldg., Little Rock, to prepare plans for \$125,000 high school.

Ark., Mountainsburg—Consolidated School Dist. No. 16 voted \$20,000 bonds for 1-story, 7-classroom and auditorium; J. P. Bingham, Crawford County Supt. of Education, Van Buren, Ark.; Haralson & Nelson, Archts., Merchants Natl. Bank Bldg., Fort Smith. 9-18

Ark., Paragould—Rural School Dist. No. 4, care Mrs. Dorothy Skagg, Greene County Supt. of Education, erect \$10,000, 1-story, brick veneer 6-classroom school; plans by State Dept. of Education, Little Rock.

Ark., Van Buren—Bd. of Education, D. M. Riffin, Supt., having plans prepared by Bassham & Wheeler, Kennedy Bldg., Fort Smith, for \$50,000, 2-story, brick high school; comp. built-up roof, wood floors, steam heat.

Fla., Gainesville—Florida State Bd. of Control, P. K. Yonge, Chmn., Carling Hotel, Jacksonville, receives bids Oct. 13 for infirmary building at University of Florida; plans by Rudolph Weaver, Archt. for Bd. of Control, Peabody Hall, Gainesville.

Ga., Thomasville—Bd. of Education having plans prepared by Lockwood & Poundstone, Marietta Bldg., Atlanta, for 2-story and basement, rein. conc. and brick high school; comp. roof, stone trim; \$125,000 bonds voted. 8-14

Ky., Lexington—University of Kentucky, Dr. Frank L. McVey, soon call for bids for \$65,000 farm engineering building on Farm Experiment Station.

La., Alexandria—Rapides Parish School Bd. called election Oct. 30 in Rigolette School Dist. No. 11 on \$75,000 bonds for auditorium and domestic science cottage at Tioga High School and repairs and equipment at other schools in dist.

La., Chatham—Jackson Parish School Bd., W. C. Clendon, Supt., Jonesboro, receives bids Nov. 6 for \$40,000, 2-story, brick high school; separate bids on heating system; plans from Seymour Van Os, Merchants Bank Bldg., Shreveport, and Geo. F. Lomax, James Bldg., Ruston, La., Archts. 9-11

La., Golden Meadow—LaFourche Parish School Bd., W. S. Lafargue, Sec., Thibodaux, soon select architect to prepare plans for \$50,000 school in School Dist. No. 9.

La., Hico—Lincoln Parish School Bd., H. L. Campbell, Supt., Ruston, receives bids Oct. 21 for auditorium and 2-classroom addition and improvements to present building for home economics room and laboratory; \$10,000; Seymour Van Os and Geo. F. Lomax, Archts., James Bldg., Ruston. 7-24

La., Mansfield—DeSoto Parish School Bd., S. M. Shows, Sec., receives bids Oct. 21 for Carmel frame school.



La., Mangham—Following contractors estimating on brick addition, gymnasium and cafeteria to Mangham High School, bids Oct. 7 by Richland Parish School Bd., Rayville: W. C. Salley, Ouachita Natl. Bank Bldg.; W. H. Blane, Frank Masling, 1510 S. Grand St.; Lee Ellis, Old Central Bank Bldg.; Matt Salley, Ouachita Natl. Bank Bldg.; all Monroe; E. T. Lee, J. V. & R. T. Burkes, Inc., American Bank Bldg., both New Orleans; Tudor & Ratcliff, Commercial Bank Bldg., Alexandria; E. E. Rabalais & Son, Burke; Knapp & East, Kaufman Bldg., Lake Charles; D. E. Chapman, Welch Bldg., Baton Rouge; P. Olivier & Son, 114 Bilbo St., Lake Charles; J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg., Monroe.

La., New Orleans—Orleans Parish School Bd., A. J. Tete, Sec., City Hall Annex, receives bids Oct. 8 for 3-story, brick and stucco Palmer School; 273 ft. on Clouet St., 136 ft. deep on Villere St. and 82 ft. on Urquhart St.; stone trim, built-up comp. roof, wood floors, 12 classrooms, domestic science dept., kindergarten, manual training dept.; E. A. Christy, Archt., Supvg. Archt. for School Bd. 9-18

La., New Orleans—Orleans Parish School Bd., A. J. Tete, Sec., City Hall Annex, has low bid at \$525,985 with auditorium and at \$423,379 without auditorium from J. A. Petty & Sons, Inc., Audubon Bldg., for 3-story, rein. conc., brick and stucco, fireproof Academic High School for Girls; accommodate 1000 pupils; besides classrooms will be 4 laboratories, school cafeteria, locker rooms, library, study hall and auditorium to seat 1500 people; E. A. Christy, Supvg. Archt. for School Bd. 9-4

La., Sicily Island—Catahoula Parish School Bd., H. W. Wright, Supt., receives new bids Oct. 7 for 2-story, rein. conc., brick and stone trim school; built-up comp. roof, wood floors, 12 classrooms, domestic science dept., library, auditorium-gymnasium; J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg., Monroe. 9-11

La., Tickfaw—Following contractors estimating on \$20,000, 1-story, 93x63 ft., brick veneer school, bids Oct. 14 by Tangipahoa Parish School Bd., Amite: Clifford H. King, Prescott Lane; The Burkes Co., Inc., N. Blvd., both Baton Rouge; Fuller & French, Mount Hermon; W. S. Rutter and McDavitt & Parkman, Brookhaven, Miss.; Anzalone Construction & Supply Co., Inc., Balter Bldg.; Wm. Wallace, Pere Marquette Bldg., both New Orleans; Dye & Mullings, Columbia, Miss.; G. L. Whitaker & Son, Franklinton; A. Seal, Bogalusa; Favrot & Livaudais, Archts., Ilibernia Bank Bldg., New Orleans. 9-18

Md., Baltimore—Public Improvement Comsn., H. J. Leimbach, Supvg. Engr., receives bids Oct. 15 for \$175,000 Margaret Brent School (No. 53), 26th and St. Paul Sts.; 3 stories and basement, 100x120 ft., 12 classrooms and auditorium; Bernard Evander, Archt., 20 E. Lexington St.; Henry Adams, Mech. Engr., Calvert Bldg.; Henry G. Perring, Struc. Engr., Court Square Bldg.; bids to close about Oct. 15 for \$210,000 administration building, 25th and Charles Sts.; plans include remodeling School No. 54 into administration offices and erecting addition; Lucius R. White, Jr., Archt., Court Square Bldg. 8-21

Md., Laurel—District Commrs., Hon. P. L. Dougherty, Engr. Dept., Room 427, Dist. Bldg., Washington, D. C., receives bids Oct. 6 for addition to pump house at District Training School near Laurel.

Miss., Tchula—Tchula Consolidated School Dist., G. W. Crow, Pres., receives bids Oct. 3 for additions and alterations to brick school; separate bids on general contract, heating, plumbing and electric wiring; \$30,000; Hull & Malvaney, Archts., Merchants Bank Bldg., Jackson.

Mo., Joplin—Bd. of Education, Dr. J. J. Barnett, soon select architect for \$250,000 North Junior High School.

Mo., Springfield—Bd. of Regents, Southwest Missouri State Teachers College, W. I. Baker, Sec., receives bids Oct. 4 for interior work of Science Building including partitions and finish in ground floor, with plumbing, heating and other mechanical equipment; plans from Hawkins & Nichols, Archts., McDaniel Bldg. 9-11

Mo., Tarkio—Tarkio Dr. J. A. Thompson, Pres., erect \$125,000, 2-story and basement, 60x150 ft., brick, steel, conc. administration building and chapel; Flet, Dunham & Kriehn, Archts., 300 W. 47th St., Kansas City; bids in.

Tenn., Clarksville—State Bd. of Education, Nashville. See Tenn., Murfreesboro.

Tenn., Cookeville—State Bd. of Education, Nashville. See Tenn., Murfreesboro.

Tenn., Murfreesboro—State Bd. of Education, P. L. Harned, Chmn., Nashville, receives bids Nov. 6 for \$225,000 science building and home demonstration building at

State Teachers College, Murfreesboro; for \$225,000, 2-story, brick and conc. building at Tennessee Polytechnic Institute, Cookeville; R. H. Hunt, Archt., First Natl. Bank Bldg., Chattanooga; and for \$200,000 girls dormitory and demonstration school at Austin Peay Normal School, Clarksville; Emmons Woolwine, Archt., Ellendale Ave., Nashville. 9-18 and 9-25

Tex., Austin—Bd. of Regents, University of Texas, Dr. John Calhoun, Comptroller, receives bids Nov. 1 for \$400,000, 4-story, brick, stone and rein. conc. classroom building; plans are also being made for letting of contract for proposed Student Bldg., sometime within next year; Herbert M. Greene, LaRoche & Dahl, Archts., Construction Industries Bldg., Dallas. 7-24

Tex., Clinton—Hinds County Bd. of Supervisors, Jackson, having plans prepared by J. M. Spain, Merchants Bank Bldg., Jackson, Miss., for \$65,000, 1-story, 200x130 ft., brick, stone trim school.

Tex., Houston—City considering election on \$1,000,000 bonds for Junior College and \$180,000 municipal stadium in Cleveland Park.

Tex., Houston—Harris County School Dist. No. 18, M. C. Nolke, Chmn., Bd. of Trustees, erect school to serve community of Channel View Acres on Market Street Road.

Tex., Mathis—Mathis Ind. School Dist. Trustees bids Oct. 3 for 1-story, brick, fireproof, 10-classroom high school; Olin Boese, Archt.; Morris & Noonan, Asso. Archts.-Engrs., both Builders Exchange Bldg., San Antonio; Lloyd D. Royer, Mech. Engr., Smith-Young Tower, San Antonio. 9-18

Tex., San Benito—San Benito Ind. School Dist. Trustees ready for bids in about 10 days for \$250,000, brick, stone and rein. conc. high school; Phelps & Dewees, Archts., Gunter Bldg.; W. E. Simpson Co., Engrs., Milam Bldg., both San Antonio.

W. Va., War — Berwind, Coalwood and War School Dist., considering consolidating and erecting high school at War; Garry & Sheffey, Archts., Bailey Bldg., Bluefield.

### Stores

Ark., Little Rock—Fouche River Land Co., H. F. Buhler, Mgr., 213 W. Second St., erect \$50,000, 2-story and basement, 100x100 ft., brick and conc. store and apartment, 12th St. and Fairpark Blvd.; comp. roofs, tile baths; owner probably builds.

D. C., Washington—Merchants Candy & Tobacco Co., 214 Ninth St., N. W., erect \$25,000, 3-story store, 430 Twelfth St., S. W.

Ga., Atlanta—Jack Rothenberg Department Store, 100 Edgewood Ave., N. E., reported, plans 2-story, brick store; comp. roof.

## BUILDING CONTRACTS AWARDED

### Association and Fraternal

Ala., Dadeville—Dadeville Lodge No. 71, A. F. & A. M., T. C. Acree, member, Bldg. Comm., let contract at \$9500 to Walter Strother for temple; brick, 2 stories, 40x80 ft.

Md., Baltimore—Additional sub-contracts let on \$1,000,000 Scottish Rite temple: Stone setting, Seymour Ruff & Sons, Inc., 2133 Maryland Ave.; stone model, J. A. Alluisi & Bro., 1728 E. Lafayette Ave.; cement, Fred. Elenbrok, 2104 Frederick Ave.; sheet metal, waterproofing, slag roofing and rolling skylights over stage, W. A. Fingles, 2256 Reisterstown Road; Lupton cement windows, Walter B. Brauns, Agt., 508 N. Charles St.; solid metal windows, Campbell Metal Window Corp., Bush and Hamburg Sts., all Baltimore; rein. steel, Concrete Steel Co., 42 Broadway, New York; brick work, Henry F. Cory, Linthicum Heights, Md.; struct. gypsum, J. B. Eurrell Co., 225 S. 15th St., Philadelphia, Pa.; steel testing, Pittsburgh Testing Laboratory, 1330 Locust St., Pittsburgh, Pa.; cast iron work, Smyser-Royer Co., York Pa.; preliminary elect. work, Roland Electrical Co., 418 E. Pratt St.; preliminary heating, W. E. Wood Co., 18 N. Howard St., both Baltimore; Clyde N. & Nelson Friz, Archts., Lexington Bldg., Baltimore; John Russell Pope, Consit. Archt., 542 Fifth Ave., New York; Chas. L. Reeder, Mech. Engr., 918 N. Charles St.; C. H. Osborne, Struct. Engr., 222 W. Franklin St.; Price Construction Co., Contr., Maryland Tr. Bldg., all Baltimore. 7-1

Mo., Elsberry—Independent Order of Odd Fellows and Ancient Free and Accepted Masons let contract for \$20,000 lodge bldg.

Ga., Atlanta—Massell Realty Co., 161 Spring St., expend \$30,000 to remodel Crumley Bldg., 45-51 Walton St.

Ga., Rome—Wylle & Porter erect 2-story and basement, brick, stone trim store; comp. roof; bids in.

Miss. Meridian—McLaurin Furniture Co., 2302 Front St., leased 3-story building on 23rd St. and remodel; first and second floors for display and show rooms, third for warehouse.

Tex., Fort Worth—Leonard Brothers, 111 N. Houston St., have permit for \$23,000 parking station to be operated in connection with department store nearing completion on Houston St. between First and Second Sts.; rein. conc. basement.

Tex., Kerrville—A. B. Williamson and J. N. Burnett erect \$10,000, 32x85 ft., brick and stucco store.

### Theatres

Ala., Sylacauga—J. W. Peck having plans revised by Hirsch & Jones, Vandiver Bldg., Montgomery, for \$25,000, 1-story, 50x120 ft., brick theatre.

Miss., Aberdeen—Elkins Brothers, Meridian, selected N. W. Overstreet Standard Life Bldg., Jackson, to prepare plans for \$50,000 fireproof theater on S. Meridian St.; seat 1000 people; store on each side of arcade. 9-25

Tex., Seguin—Development Company has plans by Marvin Eickenrodt & Bartlett Cocke, Maverick Bldg., San Antonio, and soon call for bids for 1-story and balcony, 38x94 ft., tile and conc. motion picture theater.

Va., Norton—R. H. Bolling having plans prepared by Kearfott & Arnold, Bristol, for theatre on Park Ave.

Va., Richmond—Sydnor & Hundley, Inc., George B. Sydnor, Jr., Pres., 7th and Grace Sts., having plans prepared by Carneal, Johnston & Wright, Electric Bldg., for store, Grace St., between First and Second Sts.; probably 6 or 7 stories. 8-21

### Warehouses

Md., Baltimore—Stewart & Co., Thomas P. Abbott, Pres., Howard and Lexington Sts., deferred awarding contract until Spring of 1931 on \$200,000, 2-story, steel and brick delivery warehouse and 40-car garage, 641 W. Saratoga St.; plans by office of Joseph Evans Sperry, Calvert Bldg. 7-31

Va., Lamberts Point, Norfolk—Norfolk & Western Ry. Co., W. P. Wiltsee, Ch. Engr., Roanoke, soon call for bids for 700 ft. addition to Warehouse "F" and 650 ft. addition to Warehouse "D", providing 162,000 additional sq. ft. floor space adjoining railroad's merchandise piers; \$250,000, brick, fireproof, conc. floors.

to W. O. Gladney, 3526 West Place, St. Louis; brick, 2 stories and basement, conc. foundation, terra cotta trim, marble, cut stone, metal ceilings and lath, plate glass, copper store fronts, vapor heat; O. J. Popp, Archt., Arcade Bldg., St. Louis. 9-4

Okla., Shawnee—Salvation Army, A. J. Fluke, Chmn., Bldg. Comm., erect \$30,000 bldg. by day labor; brick, frame and conc., 3 stories, 44x100 ft.; A. C. Davis & Sons, Archts. 6-19

Tex., Dallas—Young Men's Christian Assn., Edw. T. Moore, Chmn., Bldg. Comm., let contract to Nathan Wohlfeld, Construction Bldg., for 15-story central bldg., Ervay St. near Patterson Ave.; plumbing and heating, Federal Plumbing & Heating Co., \$80,850; elect. work, Electric Construction Corp., 209 S. Pearl St., \$20,500; bric. stone, steel, struc. clay tile and rein. conc., 134x112 ft.; 52x129-ft. gymnasium, 5 handball and 1 squash court, swimming pool, shower and locker rooms, laundry, barber shop, pressing shop, coffee shop; residence facilities for 260; Anton F. Korn, Jr., Archt., Thomas Bldg. 8-28

### Bank and Office

Md., Baltimore—J. A. W. Iglehart & Co., 102 St. Paul St., let contract to L. L. Chambers, 36th St. and Roland Ave., to remodel 3-story bldg., St. Paul and Fayette Sts.; new elevators; first floor for owners; Palmer & Lambdin, Archts., 513 N. Charles St. 6-19

Tex., Dallas—Austin Bros., 1815 Coombs St., reported, have contract for 700 tons struct. steel for \$1,500,000 annex for Republic National Bank & Trust Co.; Coburn & Fowler, Archts.; Inge Construction Co., Contr., both Burt Bldg., Dallas. 5-1

W. Va., Wheeling—Following sub-contracts let on \$300,000 office bldg. for Hazel-Atlas Glass Co., Conservative Life Bldg.; Cement, sand, gravel and excavation, H. L. Seabright Co., 43nd and McCulloch St.; rein. steel, Concrete Steel Co., care Wheeling Structural Steel Co., 4 28th St.; struct. steel, Wheeling Structural Steel Co.; lumber, Scott Lumber Co., Lincoln Ave.; plumbing, sewerage, gas fitting, heating and ventilating, Schofield-Cowl Co., 25 10th St.; bond to City, Lee C. Paul, Inc., 1138 Chapline St.; nails, Greer & Laing, 1501 Main St., all Wheeling; elect. work, James Cooper Electric Co., Bellaire, O.; wall ties, Weber-McDonald Wall Tie Co., Green Bay, Wis.; Hydro-Proof, Asphalt Products Co., Inc., Syracuse, N. Y.; cut stone, Harding & Cogswell, Inc., Bloomington, Ind.; sprinkler system, Grinnell Co., Investment Bldg., Pittsburgh, Pa.; Edw. Bates Franzheim, Archt.-Engr., 1425 Chapline St., Wheeling; Hutter Construction Co., Contr., Fond du Lac, Wis. 9-11

### Churches

Ala., Avondale, Birmingham—Avondale M. E. Church, South, J. A. Smith, Chmn., Bldg. Comm., let contract to D. T. Underwood, Pioneer Bldg., Birmingham, for \$90,000 bldg.; brick, stone trim, 7 story and balcony, 85x60 ft., conc. footings, stained glass windows, slate and comp. roof; seat 900; Miller & Martin, Archts., Title Guar. Bldg., Birmingham. 8-21

Fla., St. Petersburg—First Seventh Day Adventist Church has permit for \$15,000 bldg., 601 Eighth St., South; 45.6x80 ft.; work by day labor under superintendent.

La., New Orleans—Sivley Iron Works, 55900 First Ave., S., Birmingham, Ala., have orna. and misc. iron work contract for \$125,000 Our Lady Star of the Sea R. C. Church; painting, Frank J. Matthew Co., Inc., 918 Union St.; Wogan & Bernard, Archts., Canal Bk. Bldg.; Chas. Gibert Construction Co., Contr., Canal Bk. Bldg., all New Orleans. 9-28

Mo., O'Fallon—Assumption R. C. Church let contract to Duffner & Stecker, DeMenil Bldg., for 1-story and basement stone church; Henry P. Hess, Archt., Ambassador Bldg., both St. Louis. 8-14

N. C., Charlotte—Amity Presbyterian Church erect \$10,000 bldg. near Charlotte; J. M. McMichael, Archt., Selwyn Ave. ext.; Blythe & Isenhour, Contrs., Brevard Court.

Tex., Houston—Second Church of Christ, Scientist, started work on \$10,000 addition, 1402 Harvard St.; J. J. Kuhn & Co., Contrs., 816 Pecore St.

### City and County

Tenn., Knoxville—City let contract at \$38,576 to Sherman D. Cox, Empire Bldg., for juvenile detention home, Lonsdale; brick, comp. roof; W. A. Rutherford, Jr., Archt., Kingston Park. 9-4

### Dwellings

Ala., Birmingham—H. G. Fain, 1720 Roseland Drive, erect brick veneer residence; 1 story, comp. roof, furnace; Edw. D. Slater, Archt., Martin Bldg.; R. R. Ruff, Contr., 2015 Avenue G.

Ala., Opelika—W. A. Betts, Sheriff, erect brick residence, Opelika Highway near Opelika; Euel A. Screws, Contr.

Ark., Little Rock—Sun Building & Development Co., 19 Edgehill Road, erect \$15,000 dwelling, 57 Edgehill Rd.

Ala., Opelika—Dr. G. W. Blackshear erect brick and tile residence, Alta Vista; Euel A. Screws, Contr.

Ark., Fayetteville—Robt. Grimes erect frame residence, 201 E. Davis St.; 1 story, 5 rooms; owner builds.

Ark., Fayetteville—P. R. Green has contract to erect 2 brick and stucco dwellings; 1 story and basement, hardwood floors, tile baths, conc. foundations, comp. roofs, probably gas heat; also has contract for 3 frame dwellings, details as above; total \$30,000.

Ark., Harrison—Dr. J. H. Fowler erect 2 cobblestone dwellings; 1 story and basement, 30x40 ft., hardwood floors, tile baths, comp. roofs, probably gas heat; work by sub-contract.

Fla., Coral Gables, Miami—Wilbert Harborn, Contr., 2618 N. Greenway Drive, Coral Gables, erect 2 dwellings; total \$18,000.

Fla., Coral Gables, Miami—E. C. Upton, 814 Santiago Ave., started work on \$10,000 bungalow; rein. conc., conc. block and stucco, tile and oak floors, tile and comp. roof; Henry LaPointe, Archt., Huntington Bldg., Miami; day labor.

Fla., Miami Beach—Nelson R. Boice, 412 Viscaya Ave., Coral Gables, Miami, erect 1 or 2 dwellings.

Fla., Miami Beach—Henry L. Schreiber erect rein. conc., conc. block and stucco residence, W. 31st St. and Royal Palm Ave.; tile

and oak floors, tile roof, orna. stone; Weed & Virrick, Archts., 2620 Biscayne Blvd., Miami; Wm. F. Bonsack, Contr., 528 Lincoln Road, Miami Beach.

Fla., Miami Beach—W. F. Snyder, 8979 Harding Ave., laying foundation for residence; installing septic tank, erecting wall.

Fla., Miami—Dr. Peyton H. Hoge, Starks Bldg., Louisville, Ky., and 508 Madrid St., Coral Gables, Fla., let contract at \$24,619 to Sandquist Construction Co., 2692 S. W. 28th Lane, Miami, for residence and garage, S. W. 27th Ave.; Wade & Oemler, Archts., Exch. Bldg., Miami; number sub-contracts let. 9-18

Fla., South Jacksonville, Jacksonville—Better Homes Co. erect \$15,000 model dwelling, Arbor Lane, Villa Alexandria; Colonial type, whitewashed brick and clapboard; 2-car garage and servants' quarters; Hamilton Darby, Archt.; Smith-Hendrix Co., Contr., Barnett Bldg.

Ga., Atlanta—Neil Meler, Hurt Bldg., let contract to T. C. Wesley & Son, Red Rock Bldg., for residence, Dunwoody Rd.; stucco and hollow tile, 2 stories and basement, about 82x67 ft., conc. footings, hardwood and tile floors, Johns-Manville asbestos roof; incinerator; Tucker & Howell, Inc., Archts., Rhodes-Haverty Bldg. 8-21

Ga., homasville—Gov. W. Cameron Forbes, Upland Rd., Boston, Mass., has work under way on winter residence and stables; \$100,000, brick veneer and frame, 1 and 2 stories, pine floors, conc. foundations, tile and comp. roofs; address proposals on furnishings, equipment, etc., to Shepard & Stearns, Archts., 65 Franklin St., Boston; Joe M. Beutell, Contr., Box 84, Thomasville; steam heating and plumbing, Jas. Watt & Bro.; elect. work, Thomasville Hardware & Supply Co.; millwork, Thomasville Variety Works, all Thomasville; roofing, B. Mifflin Hood Brick Co., 686 Greenwood Ave., N. E., Atlanta, Ga.; waterproofing, Western Waterproofing Co., Penobscot Bldg., Detroit, Mich. 6-19

La., Many—John B. Hill erect 3 bungalows, Dillon addition; 5 rooms and bath; H. J. DeLatin, Contr.

La., New Orleans—P. Bordages, Contr., 2719 Lavender St., erect single raised dwelling, Lakeview section; tile work, orna. iron sheet metal work.

La., New Orleans—E. L. Markel, 3838 Louisiana Ave. Pkwy., erect \$15,000 English type bungalow, Music St., and \$20,000 Colonial bungalow, Sixth District; rein. steel, brick work, sheet metal work, tile; owner builds.

La., New Orleans—E. Charbonnet, Contr., 1728 St. Philip St., erect double dwelling, Touro St. near Dorgenois St.

La., New Orleans—S. Guistiniano erect single 2-story residence, 939 Verrett St.; F. Nuccio, Contr., 4001 Franklin Ave.

Md., Baltimore—Edgar H. Cromwell, 311 St. Dunstons Rd., let contract to Peyton B. Strobel Construction Co., 206 E. Lexington St., for \$10,500 residence, Hillen Rd. near York Rd.; stone and stucco, 2 stories, 29x30 ft.; Kenneth C. Miller, Archt., 206 E. Lexington. 9-4

Md., Baltimore—Henry A. Knott Co., 2107 N. Charles St., has contract for brick dwelling, Roland Park; 1 story, 26x42 ft.

Md., Baltimore—Thos. Butler, care Wyman Building Co., Contr., 3804 Grantley Rd., erect \$12,000 residence, Stoneleigh; stone and stucco, 2½ stories; Bernard Evander, Archt., 20 E. Lexington St.

Md., Baltimore—John Welsh, Bldr., 11 E. Fayette St., erect 12 brick dwellings and garages, 3907-29 Dolfeld Ave.; 2 stories; \$35,000.

Md., Baltimore—Mrs. Austin McLanahan, Greenspring and Woodland Aves., purchased old Stemmer dwelling (brick), Cave Rd. near Park Heights Ave.; remodel; Bayard Turnbull, Archt., 328 N. Charles St.; Tase, Norris Co., Contr., 903 Cathedral St.; plans not complete.

Miss., Vicksburg—A. D. Helgason let contract to E. W. Pendergraft & Son, Merchants Natl. Bank Bldg., for \$14,000 bungalow, Drummond St. near Realty St.; brick veneer and hollow tile, 2 baths, showers, Dutch lap shingle roof; plans by Raymond Pendergraft; work under way. 9-18

Mo., St. Louis—J. C. Greulich, 3131 N. Grand Ave., erect \$15,000 brick dwelling and garage, 226 Woodburne Drive; 2 stories, 56x28 ft., slate and comp. roofs, hot water heat; J. A. Greulich, Archt., 7317 Maryland; owner builds.

Okla., Oklahoma City—Lee V. Sneed, 1040 W. C St., let contract to Stokes & Nicholson, Petroleum Bldg., for \$15,000 residence; brick veneer, 1 story and basement; Thos. L. Sorey, Archt., Perrine Bldg. 8-7

Tex., Houston—Peckham Development Co., 3526 Washington St., erecting 4 frame duplexes, 6838 Avenue U, 6737 Avenue V, 7324 Avenue L and 6837 Avenue R; \$10,000.

Tex., Houston—W. H. Clark, 1205 Kenwood St., started work on 2 brick veneer dwellings, 1000 block Walling St.; 5 rooms; \$10,000.

Tex., Waxahachie—J. D. Kirven has frame work completed for \$25,000 residence after plans by Fooshee & Cheek, Archts., 1901½ N. Harwood St., Dallas; brick and stone, 2 stories, 50x60 ft., oak floors, slate roof; O. B. Bennett, Contr., Waxahachie. 9-18

Va., Roanoke—John W. Waynick, Clermont Heights, erecting \$75,000 residence; Robt. M. Allen, Archt., 155 Virginia Ave., South Roanoke; W. H. Mason, Contr., Boxley Bldg.; Stone-Tile & Supply Co., Cleveland Ave. and 17th St., furnishing stone-tile base for stucco and face brick back-up; Stone-Tile & Supply Co. also furnishing stone-tile for \$15,000 residence nearing completion for A. A. Farnham, Landscape Archt., 15 Virginia Ave., S. Roanoke; O. M. Dickerson, Contr., 1502 Campbell Ave., S. W., and for dwelling nearing completion at Bedford, Va., for Frank School, H. M. Miller, Archt., Shenandoah Life Bldg., Roanoke; E. A. Overstreet & Sons, Contrs., Peak St., Bedford.

### Government and State

D. C., Washington—Henry Alexander, Inc., 1800 E St., N. W., Washington, has contract at \$75,882 for fire alarm system, clock system, etc., \$17,000,000 Department of Commerce bldg.; York & Sawyer, Archts., 100 E. 42nd St., New York; Consolidated Engineering Co., Inc., Contr., 20 E. Franklin St., Baltimore, Md. 7-25-29

D. C., Washington—Smythe & Co., 1416 F St., N. W., Washington, have contract at \$11,750 for painting plaster, etc., in \$1,000,000 extension to Government Printing Office; Rust Engineering Co., Contr., Amer. State Bk. Bldg., Pittsburgh, Pa., and District Natl. Bank Bldg., Washington; Smythe & Co. also have contract at \$5887 for misc. bronze work in \$10,000,000 bldg. for Bureau of Internal Revenue. 12-5-29 and 5-22-30

D. C., Washington—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., let contract to J. Geo. Bensele Co., 3005 Shannon Drive Baltimore, Md., for changes to fourth floor, Treasury Bldg.; also to Bensele Co. at \$9879 for misc. mech. work in new \$10,000,000 bldg. for Bureau of Internal Revenue. 9-4 and 5-22

Fla., Pensacola—Navy Dept., Bureau of Ards and Docks, Washington, D. C., let contract at \$59,442 to Columbia Contracting Co., 6 Day Court, New York, for boilers, oil burners and flue, Naval Air Station. 9-18

Ga., Savannah—Following sub-contracts let on \$900,000 remodeling and enlarging of post office: Brick, tile, cement, stone, sand and lime, W. J. Bremer, No. 753 Wheaton St.; lumber, Savannah Planing Mill Co., 746 Wheaton St., both Savannah; struct. steel, Carolina Steel & Iron Co., S. Elm St. ext., Greensboro, N. C.; rein. steel and metal pans Dudley Bar Co., Brown-Marx Bldg., Birmingham, Ala.; excavation, Rentz Constr. Co., Bldg., Asheville, N. C.; millwork, A. S. Bacon & Sons, Schwartz Ave., Savannah. Contract noted 9-4.

Okla., Tulsa—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., let contract at \$632,600 to Charles Welts' Sons, Des Moines, Iowa, for Federal bldg., S. Boulder Ave.; white stone, 3 stories. 9-25

Tex., Randolph Field—Constructing Quartermaster, Capt. A. W. Parker, let contract at \$50,188 to Kirkwood, Wharton & Lee, 617 N. Flores St., San Antonio, for gas distribution system. 8-14

### Hospitals, Sanitariums, Etc.

Ala., Gadsden—August H. Meyer & Co., Oshkosh, Wis., have elect. work contract (exclusive of fixtures) for \$750,000 Holy Name of Jesus Hospital; Schmidt, Garden & Erikson, Archts., 104 S. Michigan Ave., Chicago, Ill.; J. P. Burke, Constr. Engr., P. O. Box 78, Gadsden; Foster & Creighton Co., Contr., Protective Life Bldg., Birmingham, Ala. Contract noted 8-14.

La., New Orleans—Additional sub-contracts let on \$2,000,000 U. S. Marine Hospital: Glazing, Pittsburgh Plate Glass Co., 341 Girod St.; sheet metal work, Acme Blow Pipe & Sheet Metal Works, 713 Magazine St., both New Orleans; plastering, P. L. Gomez & Co., Bona Allen Bldg., Atlanta, Ga.; R. P. Farnsworth & Co., Contrs., Maritime Bldg.; marble, Georgia Marble Co., Tate, Ga.; hardware, R. D. Pitard Hardware Co., Inc., 214 Camp St.; struct. steel, Ingalls Iron Works Co., Masonic Temple, all New Orleans; orna. iron, Logan Co., Franklin and Buchanan Sts., Louisville, Ky. 9-25

Mo., St. Louis—McNamara Plumbing Co., 6236 Deomar Blvd., has plumbing contract for \$250,000 nurses' home and school; heating, Elliott & Barry Engineering Co., 4060 W. Pine Blvd.; wiring, Eclipse Electric Co., 1224 Pine St.; O'Meara & Hills, Archts.,



Arcade Bldg., all St. Louis; Schuette & Meyer, Engrs., St. Paul, Minn.; Wimmer Contracting Co., Contr., 916 Victoria Bldg., St. Louis. 8-28

N. C., Sanford—Lee County Hospital Bd. of Trustees let contract to J. W. Stout, Inc., Sanford, for \$125,000 hospital, McIver Park; brick, 3 stories and basement, 140x42 ft., cement and comp. floors, struct. steel, cast stone, tile partitions, steel sash, tile and marble baths, elevator, incinerator, tar and gravel roof; Eric G. Flannagan, Archt., Henderson; elect. work, plumbing and 1-pipe steam heating not let. See Want Section—Building Material and Equipment. 8-18

Okla., Clinton—Clinton General Hospital Assn. let contract at \$75,130 to Chester Cowen, Chickasha, for hospital; brick and conc., 3 stories and basement, 40x132 ft.; Edw. J. Peters, Shawnee. 7-24

S. C., Florence—Tuberculosis Comsn. let contract to Southern Builders, Inc., for brick sanatorium to serve Florence and Darlington counties; conc. foundation, 40 beds; Wilkins & Hopkins, Archts. 8-7

Tenn., Union City—Dr. R. G. Latimer, Dr. M. A. Blanton and others started work on clinic, Third and Church Sts.; brick, 1 story, 72x34 ft., foundation to permit several additional stories, steam heat, oil burner, light call system; X-ray equipment; Sam Carman, Contr. 8-28

Tex., Brenham—Physicians & Surgeons Hospital of Brenham let contract to W. L. Goyen, Post-Dispatch Bldg., Houston, for \$60,000 Sarah B. Milroy Memorial Hospital; fireproof, steel and rein. conc., 2 stories and basement; 2 operating rooms; X-ray equipment; solarium; Lamar Q. Cato, Archt., Bankers Mortgage Bldg., Houston. 9-4

Tex., San Antonio—Woodmen of the World, W. A. Fraser, Pres., Omaha, Neb., let contract to U. H. Wagner ravis Bldg., San Antonio, for chapel and bird sanctuary; W. O. W. Hospital, N. New Braunfels Ave.; Gothic type, rein. conc. and Indiana limestone, carillon tower of 25 bells; \$150,000; Phelps & Dewees, Archts., Gunter Bldg., San Antonio. 8-28

W. Va., Keyser—Dr. T. E. Bess and Dr. R. W. Bess erect hospital, S. Mineral St. near Fort Ave.; stone, brick, conc. and steel, 4 stories, 60x156 ft., 60 beds; Snider Bros., Inc., gen. contract at \$63,317. 8-28

### Hotels and Apartments

Fla., Jacksonville—Burbridge Hotel, David Berkowitz, Pres.-Mgr., W. Forsyth St., let contract to George W. Hessler, 111 W. Ashley St., for \$25,000 improvements for coffee shop with soda fountain equipment; also for \$10,000 improvements to 2-story fireproof building in rear of hotel for storage garage. 8-28

Fla., Miami Beach—Gulf Stream Apartment Corp., J. A. Benson, Sec., 6300 Collins Ave., let contract to M. R. Harrison Construction Co., 500 N. E. 45th St., Miami, for \$15,000, rein. conc., conc. block, stucco storage garage; Robt. A. Taylor, Archt., Spanish Village. 8-28

Ga., Milledgeville—Baldwin Hotel, John and Clifford Stiles, remodel 3-story and basement hotel; redecorate, new furnishings, baths, plumbing, painting, millwork; provide for 2 store-units on ground floor; owner builds. 8-28

Md., Elkton—Hotel Central, J. Lewis, Propr., erect 10-room addition and remodel hotel; 2 stories, brick; J. E. Thornton, Contr. 8-28

Miss., Biloxi—Mrs. E. L. Brady, Propr., Avalez Hotel, let contract to Collins Brothers Construction Co. to rebuild hotel recently damaged by fire; \$20,000; Shrouds & Bean, Archts., Gulfport. 9-4

Mo., St. Louis—Arsenal-Watson Co., 4249 S. Kingshighway, has permit for two 3-story, 67x83 ft., brick tenements, 4061 and 71 Gravois Ave.; \$90,000, comp. roofs, steam heat. 8-28

Mo., St. Louis—Paramount Construction Co., 8th and Chestnut St., has permit for \$75,000, 3-story, 60x80 ft., brick tenement, 4417 Forest Park; O. J. Popp, Archt., Arcade Bldg. 8-28

N. C., Greensboro—Jefferson Hotel Corp., H. A. Moffitt, Pres., N. Main St., High Point, let contract to Angle-Blackford Co., Am. Natl. Bank Bldg., Greensboro, for \$1,000,000, 13-story and basement, rein. conc. and struc. steel, brick and tile Jefferson Hotel; stone trim, built-up roof; Herbert Hunter, Archt., 116 N. Main St., High Point. 7-22

### Miscellaneous

Ala., Anniston—Swann Chemical Co., E. H. Buford, Ch. Engr., erecting 2-story, 45x45 ft., brick welfare building; plans and construction by owner; Carmichael Tile Co., 2309 Fifth Ave., S., Birmingham, has contract for tile work. 9-25

Ark., Belle Vista—Linebarger Bros., C. A. Linebarger, Mgr., start work about Oct. 1 on \$20,000, 2-story, stone, conc. and frame dance pavilion; comp. roof, hardwood floors; also grocery, drug store, beauty parlor, dressing rooms, drink stands; owner builds; sub-contract. 8-28

Md., Elkton—Thomas Brothers erect \$10,000, 2-story, brick, 34x4 ft., brick restaurant and apartment; D. R. Woodal, Contr. 8-28

N. C., Charlotte—The McClintock Corp., J. L. McClintock, Sec.-Treas., 1002 Queens Road, start work next week on brick clubhouse on Lawyers Road; Standard Construction Co., Contr., Independence Bldg.; M. R. Marsh, Archt., Builders Bldg. 9-11

Tex., Alpine—Alpine Country Club, Inc., Box 65, let contract at \$10,400 to Odell Bros. for 1-story, 52x92 ft. clubhouse; cobble stone and native rocks. 9-25

### Schools

Ark., Forrest City—Forrest City Consolidated Dist. School Bd. let contract at \$89,900 to Hewett & Russell, Little Rock, for \$125,000 Junior-Senior High School; electric, \$32,000, A. C. Electric Co., North Little Rock; Wittenberg & Deloney, Archts., Home Insurance Bldg., Little Rock. 9-4

Ark., Western Grove—Newton County Bd. of Education let contract to R. E. Wages, Fayetteville, for \$10,000, 2-story brick school; comp. roof, 6 classrooms; plans by State Bd. of Education, Little Rock. 9-4

Ga., Decatur—Agnes Scott College, Dr. J. R. McCain, Pres., let contract to Williams Construction Co., Red Rock Bldg., Atlanta, for alterations to administration building; Edwards & Sayward, Archts.; Robt. B. Logan, Asso. Archt., both Marietta Bldg., Atlanta. 8-28

Ga., Albany—Georgia Normal & Agricultural College, H. McIntosh Chmn., let contract at \$64,000 to O. B. Hinds for dining hall and practice school; both one story and basement, brick stone trim, comp. roof; Daniell & Beutell, Archts., Georgia Savings Bank Bldg., Atlanta. 9-18

La., St. Benedict—Church of St. Joseph's Abbey, Father Albert Paul in charge, let contract to A. LeBlanc & Son, Bogalusa, for 3-story, 114x194 ft., rein. conc., brick and stone trim abbey building to include church and living quarters for seminary; \$175,000, tile and comp. roof, terrazzo floors; Theo. Brune, Archt., 1536 Felicity St., New Orleans. 8-28

Md., Baltimore—Following sub-contracts awarded on \$150,000, 3-story, brick, steel and rein. conc. law building at University of Maryland for which Consolidated Engineering Co., 20 E. Franklin St., has general contract: Roofing and sheet metal, Charles S. Dell, Inc., Ostend and Ridgely St.; struc. steel, Baltimore Steel Co., 1400 Eastern Ave.; rein. steel, Concrete Steel Co., Charles A. Weiller, Rep., Lexington Bldg.; granite, Olive C. Putney, Granite, Md.; limestone, Ingalls Stone Co., Bedford, Ind.; heating, plumbing and ventilating, Lloyd E. Mitchell, Inc., 915 E. Monument St.; Smith & May, Archts., Baltimore Trust Bldg. 6-19

Md., Owings Mills—Rosewood State raining School, Dr. Frank W. Keating, Supt., 330 N. Charles St., let contract to Julius A. Kinslein, American Bldg., for 2 cottages; to Cogswell Construction Co., 406 Park Ave., for dormitory and to Hicks & Chambers, minor alterations to administration building; Wm. W. Emmart, Archt., Union Trust Bldg., all Baltimore. 8-28

Mo., Kirksville—State Teachers College let contract to Rollins & McKim for boiler house remodeling and tunnels; Wm. B. Ittner, Inc., Archt., Continental Bldg., St. Louis. 8-28

Mo., Ferguson—Bd. of Education let contract to Edw. F. Stoeckel, 4647 Moraine, St. Louis, for brick and rein. conc. school; Wm. B. Ittner, Inc., Archt., 3615 Olive St., St. Louis. 8-28

Mo., Parkville—Park College, Dr. F. W. Hawley, Pres., reported, let contract to H. H. Fox, 301 E. 30th St., Kansas City, for \$150,000, 1- and 2-story and part basement, rein. conc., brick and stone chapel. 8-28

N. C., Rich Square—Northampton County Bd. of Education let contract at \$18,400 to Strickland Bros., Zebulon, for school; one story, brick; J. M. Kennedy, Archt., Gilmer Bldg., Raleigh. 9-11

Okla., Marietta—Bd. of Education, Dist. No. 10 let contract at \$9700 to Clyde Burton for 1-story and part basement, frame, 7-classroom school; J. B. White, Archt., Ardmore. 8-28

Okla., Seminole—Bd. of Education, Geo. F. Killingsworth, Pres., let contract to R. H. Chase for \$30,000, one- and two-story, 100x100 ft., brick, stone and rein. conc., high school addition; Hawk & Parr, Archts., First Natl. Bank Bldg., Oklahoma City. 8-28

Tenn., Nashville—Bd. of Education, Albert E. Hill, Pres., will award contract to B. Regen, 127 Fifth Ave., N., for \$150,000 North Nashville Jr. High School; 3 stories, brick, fireproof, limestone trim, auditorium to seat 960 people, 27 classrooms, cafeteria and kitchen; Marr & Holman, Archts., Stahlman Bldg. 9-18

Tex., Aspermont—Bd. of Education, J. W. Joyce, Sec., let contract at \$46,480 to H. H. Shadle for 1-story, 213x130 ft., 10-classroom, brick, tile, stone and rein. conc. high school; S. B. Haynes, Archt., Lubbock. 8-28

Tex., Salado—Salado Consolidated High School Dist. No. 120, A. W. Capps, Belton Natl. Bank Bldg., Belton, Pres., let contract at \$14,000 to Leslie Mitchell, Belton, for addition to and remodeling high school; one story, brick and frame, wood and conc. floors; W. E. Ketchum, Archt., Pope Bldg., Austlin. 9-11

Va., Lexington—Following additional sub-contracts awarded on 3-story, brick and stucco Nichols Engineering Hall at Virginia Military Institute for which J. L. Crouse, Box 642, Greensboro, N. C., has general contract at \$147,675; Steel sash, David Lupton's Sons Co., Dan's Bldg.; common brick, Locker & Co.; finishing hardware, Howell Bros., 602 E. Broad St.; steel partitions, J. G. Wilson, Inc., Dan's Bldg.; misc. and orna. iron, J. D. Wilkins, all Richmond; Carneal, Johnston & Wright, Archts., Electric Bldg., Richmond. Contract noted awarded in Record 7-10. 8-28

Va., University—University of Virginia let contract at \$190,476 to Johnson Construction Co., Law Bldg., Norfolk, for nurses' home, south of preventorium wing of University Hospital; 3 stories and basement; plans by Architectural Comsn., John Kevan Peebles, Chmn., Law Bldg., Norfolk. 9-11

W. Va., Bartley—Big Creek Dist. Bd. of Education, War, let contract to Green & Stowe, Welch, for addition to school building. 8-28

### Stores

Fla., Miami Beach—Wade H. Hartley, 1412 S. Bayshore Drive, Miami, let contract to C. E. Shappell, 1350 Collins Ave., Miami Beach, for \$50,000, rein. conc., struc. steel frame, conc. block and brick store, 5th St. and Euclid Ave.; contain 11 shops, comp. roof, cement floors; T. Hunter Henderson, Archt., 1437 Twentieth St.; work started. 8-28

Ga., Atlanta—M. Woodward, 1449 Jonesboro Road, S. E., erect 2-story, brick veneer store; tar and gravel roof; day labor. 8-28

Ga., Rome—Mrs. J. M. Bradshaw, College Heights, Rome, erect \$12,000, 1-story, brick store; Chas. Blackstock, Contr., 225 Broad St. 8-28

Ga., Wavercross—L. B. Harrell let contract to T. J. Darling for brick store to be leased to Western Union Telegraph Co.; comp. roof. 8-28

La., Opelousas—A. Clary started work on 1-story 33x85 ft. brick store on Main St.; Thurston McKinney, Contr.; to be leased by Clarence Saunders. 8-28

Miss., Natchez—Abe Beekman let contract to Wm. Stietenroth for improvements to store, Main and Commerce Sts. 8-28

Mo., Springfield—G. W. O'Neal, 1213 Roanoke St., soon start work on \$12,000, 2-story and basement, brick and steel business building; E. R. Shates, Contr., 1214 S. Jefferson St. 8-28

Mo., St. Louis—O. Schultes, 3325 S. Jefferson Ave., started work on \$15,000, 1-story, 25x117 ft. brick store; Higbee Bros. Construction Co., 4164 Delmar Blvd.; Emil J. Schleicher, Archt., 3607 California Ave. 8-28

Tenn., Memphis—James S. Robinson, 32 N. Second St., remodel drug store; \$25,000, 4 stories, terra cotta and plate glass front, entrance to be solid bronze; William T. Hudson, Contr., 63 S. Third St.; Joe Wallace, Archt., Bank of Commerce Bldg. 8-28

Tex., Fort Worth—Quisile & Andrews, 2212 W. Seventh St., have contract for \$13,000, 2-story, 25x95 ft. store, Second and Houston Sts., for James Harrison, Burk Burnett Bldg. 9-18

Tex., Fort Worth—Winfield Scott Estate, Fort Worth Natl. Bldg., remodeling former Fair Bldg., Fifth and Main Sts., for drug store to be leased to Walgreen Drug Co.; \$13,000; James T. Taylor, Contr., Aviation Bldg. 8-28

Tex., Fort Worth—Gilbert Estate let contract to R. F. Ball Construction Co., Electric Bldg. Annex, for 3-story, 85x100 ft., brick, stone and rein. conc. building, Third and Main Sts.; Jas. B. Davies, Archt., 1312 Hemphill St.; Western Union Telegraph Co., Lessee, 707 Main St.

Tex., Liberty—B. G. Riviere erect \$12,000 stucco, terra cotta trim store; Christy-Dolph & Collins, Contrs., 501 Procter St., Port Arthur.

### Theatres

N. C., Charlotte—Warner Brothers Pictures, Inc., 321 W. 44th St., New York, remodel theater on S. Tryon St. at cost \$25,000; improvements to front, interior decora-

tions, painting, etc.; George Overend, Local Mgr.; day labor.

### Warehouses

Ala., Mobile—O. M. Gwin Construction Co., 3503 Fern St., New Orleans, La., has contract for 1-story, 50x350 ft., storage building to be used by Bulk Transportation Co.; struc. steel frame, covered with corrugated iron, movable hatches, steel chutes, metal windows, rolling doors.

La., Monroe—V. Frank Lynn Co., Inc., Gordon Ave. and Grayling switch, started work on 80x150-ft., sheet iron exterior warehouse; day labor.

Okla., Tulsa—Sand Springs Interest, care T. H. Steffens, 203 S. Olympia St., let contract to Frank Forner Construction Co.,

Ritz Bldg., for \$25,000, 3-story and basement, brick warehouse.

S. C., Gaffney—Victor Cotton Oil Co., erect 2-story, 60x100 ft., brick warehouse; built-up roof, sprinklers; owner builds; M. R. Marsh, Archt., Builders Bldg., Charlotte, N. C.

Tenn., Memphis—Patterson Transfer Co., Robert E. Galloway, Pres., 124 N. Second St., let contract to Consolidated Contractors, 658 East St., for \$140,000, 2-story, 280x193 ft., rein. conc. warehouse, Pennsylvania St. and Georgia Ave.; 100,000 sq. ft. floor space; W. F. Schulz, Archt.-Consit. Engr., Shrine Bldg.

Tenn., Springfield—S. R. Russell let contract to Lee T. Brinkley for remodeling warehouse, Main St. and 10th Ave., S.; \$40,000; improvements to rear section and basement, new driveways on two sides.

### THE CLASSIFICATIONS IN THIS SECTION ARE:

## WANT SECTION

#### Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

#### Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

#### Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

#### Machinery and Supplies

**Generator Set.**—Santee Heading Corp., Clinton & Elm Sts., Lambertville, New Jersey, plans rebuilding burned plant at Allendale, S. C. and wants 1125 kw. generator unit, 60 cycle, 3 phase, 220 volt, direct connected or belt driven.

**Engines (Oil).**—C. L. Hills, 356 Central Ave., St. Petersburg, Fla.—Wants prices and data immediately on Diesel oil engines, Fairbanks Morse or equal, 60, 100, 120, 180, 200, 240 h. p. or larger, stationary type; also 100 to 180-h. p., C-O type Fairbanks Morse marine Diesel.

**Pump (Steam).**—E. W. Cooper, 2104 Eastland Ave., Nashville, Tenn.—Wants prices and data on used Nye steam pump manufactured by George Nye Steam Pump Co., Chicago, Ill., and often used in silica and other sand operations.

R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants prices and data on following:

- (1) **Hoist (Gas)**—single drum, sufficient to hold 2500 ft. of 1/2-in. rope, 25 to 40 h. p., used, good condition
- (2) **Shovel (Gas)**—crawler type, about 10 cu. ft. capacity, 310 Universal preferred, used, good condition.

**Woodworking Machinery.**—Santee Heading Corp., Clinton & Elm Sts., Lambertville, New Jersey, plans rebuilding burned plant at Allendale, S. C. and wants:

- (1) **Saw Machines**—chain feed cross cutting
- (2) **Saw**—32-in. swing cross-cut
- (3) **Surfacer (Planer)**—24-in. or wider, single motor connected
- (4) **Table**—twin rip saw
- (5) **Turners**—three trevor heading.

Guyan Machine Shops, Logan, W. Va.—Wants prices and data on following:

- (1) **Boring Mill**—horizontal, boring, drilling and milling or floor mill
- (2) **Crane**—about 5-ton capacity, locomotive type, electrically or gasoline operated
- (3) **Drill (Radial)**—preferably single pulley drive
- (4) **Hoists**—for I-beam, 1 to 5-ton capacity, a. c. and d. c., 220 volts
- (5) **Lathes**—one about 50 in. x 14 ft. for turning locomotive tires, one about 20 in. x 12 ft. or longer, modern, quick change, taper attachment
- (6) **Motors**—30 h. p., 220 volts, a. c. or d. c., 1750 r. p. m.; a. c., 22-440 volts, 3 phase, 60 cycle, 5 h. p. to 100 h. p.
- (7) **Power Plant**—consisting of water tube, stoker fed boilers and 2 300-kw., 275 volt d. c., direct driven generators with switchboard.

Texas Harvest Hat Co., San Agustin St., Laredo, Tex., erecting factory building and wants data and prices on following:

**Concrete Mixer**—Jaeger non tilt.

**Saw Rig.**

W. M. Smith & Co., (Mchy. Dealer), 3601 First Ave., North, Birmingham, Ala.—Wants prices and data on following:

- (1) **Crane (Locomotive)**—8 wheel, 18 or 20 tons capacity
- (2) **Generator Sets**—2, a. c., one 80 to 100 kw., other 300 to 400 kw.
- (3) **Lathes**—machine shop, with 33 to 36-in. chuck, several machine shop lathes, 10 to 30-in. chuck, and length.

#### Miscellaneous

J. V. & R. T. Burkes, Inc., Contr., 1112 American Bank Bldg., New Orleans, La., estimating on waterworks plant, Kenner, La. Henry A. Menz & Co., Engr., Hammond, La., and wants sub-bids and material prices on same before Oct. 14.

**Turnbuckles.**—Oneonta Forge & Screw Co., Oneonta, Ala.—Wants prices and data from manufacturers of turnbuckles.

#### Building Material and Equipment

James Hatcher, Pikeville, Ky., wants prices on following for \$300,000 hotel:

**Flooring**—tile for office on first floor.

Santee Heading Corp., Clinton & Elm Sts., Lambertville, New Jersey, plans rebuilding burned plant at Allendale, S. C., and wants following:

**Cement**  
**Roofing**—corrugated metal  
**Sand**  
**Stone.**

Standard Telephone Co., 201 Myrick Bldg., Lubbock, Tex., J. M. Keffer, Shattuck, Okla., erecting telephone exchange building at Waynoka, Okla., and wants prices on following:

**Floor Coverings**  
**Office Furniture**  
**Venetian Blinds.**  
**Coaling Equipment**—electric water  
**Lighting Fixtures**  
**Radiators**—gas-steam.

Algernon Blair, Contr., First Natl. Bank Montgomery, Ala., wants prices on following for \$60,000 store under construction for Randolph and Clancey Estates:

**Flooring**—hardwood  
**Metal Ceilings.**

Guyan Machine Shops, Logan, W. Va., wants prices and data on following:

**Building**—about 40x80x12 ft. to eaves.

J. W. Stout, Inc., Contr., Sanford, N. C., wants prices on following for \$90,000 hospital:

**Dumb Waiters**  
**Flooring**—composition  
**Metal Doors**  
**Roofing**—built-up  
**Tile**—hollow.

#### Bids Asked

**Air Compressor**—See Watering System.

**Automobiles.**—District Commrs., Washington, D. C.—Bids Oct. 9 for passenger automobiles.

**Boat Spikes.**—U. S. Engr. Office, Huntington, W. Va.—Bids Oct. 9 for boat spikes for guide cribs, Nos. 2, 4 and 6, Kanawha River.

**Bridge.**—Virginia. See Construction News—Roads, Streets, Paving.

**Brooms, etc.**—Quartermaster Supply Officer, Fort Sam Houston, San Antonio, Tex.—Bids Oct. 13 for 3000 stable brooms, 7000 scrubbing brushes, 1000 g. i. cans, 26-gal. capacity and 10,000 cans lye.

**Bridges.**—State of Missouri—Bids for 25 bridges. See Construction News—Roads, Streets, Paving.

**Building Alterations.**—Treasury Dept., office of Supvg. Archt., Washington, D. C.—Bids Oct. 10 for miscellaneous changes in hearing rooms and cafeteria, new partitions, cabinets, etc., in U. S. Internal revenue building, Washington.

**Cement (Portland).**—State Highway Comsn., C. M. Williamson, Director, Jackson, Miss.—Bids Oct. 13 for Portland cement required during 12-months period, (estimated at approx. 250,000 bbl.) on construction of state highways.

**Coal.**—Ch. Property and Contract Subdivision, Supply Div., U. S. Veterans' Bureau, Arlington Bldg., Washington, D. C.—Bids Oct. 23 for 2000 tons bituminous mine run or slate coal, U. S. Veterans' Hospital, Lexington, Ky., as required during period ending June 30, 1931.

**Cooking Ranges and Heaters (Gas).**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Oct. 6 for gas cooking ranges and heaters.

**Dam.**—Bd. of Directors of Brown County Improvement Dist. No. 1, Brownwood, ex.—Bids Nov. 6 for constructing earthen reservoir da mand appurtenant works across Pecan Bayou, including spillway for reservoir. See Construction News—Drainage, Dredging and Irrigation.

**Drainage Improvements.**—Commrs. of Subdistrict No. 1 to Drainage Dist. No. 2, Jefferson County, Office of A. F. Triplett, Pine Bluff, Ark.—Bids Oct. 7 for drainage improvements. See Construction News—Drainage, Dredging and Irrigation.

**Electric Wiring.**—See Sewage Disposal Plant.

**Kerosene.**—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Oct. 13 for kerosene, Sch. 2595.

**Lumber, etc.**—Quartermaster, Fort Reno, Okla.—Bids Oct. 6 for 17,000 ft. lumber, millwork and 8000 ft. wall board.

**Meters.**—District Commrs., Washington, D. C.—Bids Oct. 15 for water meters.

**Miscellaneous Machinery.**—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Oct. 7 for motor driven engine lathe, hand power sheet metal brakes, motor driven lathe and dowel machine, motor driven surface, planer and jointer and sawing machine; bids Oct. 14 for motor driven vertical sliding head drill press, washing machines and laundry presses.

**Miscellaneous.**—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Oct. 15 for following, Sch. 2594:

**Rock-crushing plant, power drag scraper, automobiles, trucks, school bus, grinding machine, dies, wheel barrow handles, glove fasteners, fire extinguishers, etc.**

**Miscellaneous Machinery.**—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Oct. 7 for horizontal crank shaper, motor driven bed gap lathe with geared headstock, motor driven blue and brown printing machine, platen printing presses.

**Motors.**—See Watering System.

**Pipe (Vitrified).**—See Sewer Construction.

**Pipe (Concrete).**—See Sewer Construction.



**Motor (Electric).**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Oct. 6 for squirrel cage motor, horizontal shaft, totally inclosed, no load synchronous speed, 1800 r. p. m., 220 volt, 60 cycle, 3 phase, single h. p., ball bearing, complete.

**Pipe (Vitrified).**—See Sewage Disposal Plant.

**Pipe (Cast Iron).**—See Sewage Disposal Plant.

**Pipe (Galvanized).**—See Watering System.

**Pumps.**—See Sewage Disposal Plant.

**Pump.**—See Watering System.

**Radiators.**—District Commrs., Washington D. C.—Bids Oct. 13 for cast iron radiators.

**Radio Supplies.**—U. S. Coast Guard Headquarters, Washington, D. C.—Bids Oct. 6 for 32 radio broadcast receivers, 10 dynamic speakers and 54 radio broadcast receivers.

**Removing Bridge.**—State Roads Comsn., H. L. Stuart, Sec., Baltimore, Md.—Bids Oct. 7 for removal of existing bridge superstructure over Deer Creek on road, Churchville to McCann's Corner.

**Road, etc.**—Arlington, Va. See Construction News—Roads, Streets, Paving.

**Roads.**—State of Oklahoma—Bids for 2 roads. See Construction News—Roads, Streets, Paving.

**Roads.**—State of Virginia—Bids for 3 roads. See Construction News—Roads, Streets, Paving.

**Roads.**—State of Mississippi—Bids for 7 roads. See Construction News—Roads, Streets, Paving.

**Road.**—Georgia—See Construction News—Roads, Streets, Paving.

**Radio Tubes, etc.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Oct. 6 for 400 radio tubes, 500 ft. flexible cord and 20 lb. solder, delivery Washington, D. C.

**Roads.**—State of Missouri—Bid for 32 roads. See Construction News—Roads, Streets, Paving.

**Sewer Construction.**—Bd. of Awards, Baltimore, Md.—Bids Oct. 8 for sanitary sewers and storm sewers, Storm Water Cont. No. 156; work includes 400 ft. of 30-in., 136 ft. of 48-in., 470 ft. of 36-in., 440 ft. of 33-in., 584 ft. of 30-in., 944 ft. of 27-in. rein. conc. pipe drains; 945 ft. of 15-in. and 18-in. diam. vit. pipe drain; 480 ft. vit. pipe sewer; manholes, etc.; Milton J. Ruark, Sewerage Engr.

**Sewer Construction.**—Bd. of Awards, Baltimore, Md.—Bids Oct. 15 for sewers, Brooklyn and Curtis Bay, Sanitary Cont. No. 222; work includes 900 cu. yds. earth excavation and refill sub grade for main line sewer and drain, diam. about 8-in. in open cut; 16,562 ft. excavation and refill, sub grade for 8-in. pipe sewer; 6330 ft. excavation and refill for house connections; 407 ft. laying 21-in. vit. vit. pipe drain; 6307 ft. furnish and lay 5 and 6-in. vit. pipe house connections; furnishing and laying 16,000 ft. of 8-in. vit. sewer; standard manholes; 5M ft. b. m. lumber for permanent foundation; relaying cement or granolithic pavement, etc.

**Sewage Disposal Plant.**—City of Ashland, Ky., C. Fraile, Mayor—Bids Oct. 6 for furnishing materials and constructing sewage disposal plant received by Tabulating Committee for all buildings, machinery, e. i. pipe, vit. pipe, pumps, heating, plumbing, electric wiring, etc.; Barstow & McCurdy, Inc., Engrs., Cincinnati, O. and Akron O.

**Shingles (Asphalt).**—U. S. Engr. Office, Huntington, W. Va.—Bids Oct. 7 for asphalt shingles for dwelling.

**Street.**—Cuthbert, Ga. See Construction News—Roads, Streets, Paving.

**Stationery Supplies.**—Quartermaster Supply Officer, Fort Sam Houston, San Antonio, Tex.—Bids Oct. 10 for rubber bands, note books, typewriter brushes, blackboard erasers, pencil erasers, correction fluid, mimeograph ink, writing ink, etc.

**Tank and Tower.**—See Watering System.

**Trucks.**—U. S. Engr. Office, Jacksonville, Fla.—Bids Oct. 6 for 2 motor trucks.

**Turbine Transmission Equipment.**—U. S. Engr. Office, Huntington, W. Va.—Bids Oct. 6 for turbine transmission equipment for Dam No. 22, Ohio River.

**Timber.**—U. S. Engr. Office, Huntington, W. Va.—Bids Oct. 9 for timber for repairs to guide cribs, Locks 2 and 4, Kanawha River.

**Underground Telephone Conduit System.**—Signal Officer, Fort Sam Houston, Tex.—Bids Oct. 24, in triplicate, for underground telephone conduit system, Randolph Field, Tex. See Building News—Building Proposed, Government and State.

**Watering System.**—Blowing Rock Improvement Co., Inc., Statesville, N. C., has under consideration 2 plans for watering system to take care of 18 greens on Green-Park Norwood Golf Course, Blowing Rock;

first system to furnish pressure by compressed air, taking water from lake direct to greens, greatest elevation being 130 ft. above lake, would require following: New or used galvanized pipe, if used must be of good quality with new threads and connections 7350 ft. of 1-in., 1700 ft. of 1½-in., 900 ft. of ½-in. and 2400 ft. of 2-in.; air compressor and tank of sufficient size and capacity to force water to elevation of 130 ft. and give

sufficient pressure to operate sprinklers on greens; second system would require an additional 1520 ft. of 2-in. pipe also tank or tanks totaling 20,000 to 30,000 gals. capacity; also pump and motor sufficient to lift water from lake to tanks elevated 242 ft. above lake; tank or tanks shipped knocked down; all prices to be delivered Lenoir, N. C.; state prices on complete outfit to install either system.

## INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers, whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

### Cable Corporation Changes Operating Policy.

The General Cable Corporation, New York, announces that effective October 1 the company will operate as one organization. All sales, manufacturing and accounting activities now carried on independently and in the name of the individual divisions are to be transacted only in the name of the Corporation. All customers' accounts will be combined in a General Cable Central Accounting Office at Rome, N. Y., to which accounts now maintained in the name of the divisions will be transferred. Southern sales offices of the General Cable Corporation are located in Atlanta, Birmingham, Charlotte, Dallas, Kansas City, Washington and St. Louis, while the company's Southern plants are at Baltimore, Mobile and St. Louis, with Southern warehouses at Mobile and Dallas.

### 10-Inch Merchant Mill Planned.

Directors of the National Steel Corporation, Pittsburgh, have authorized the Great Lakes Steel Corporation, Detroit, Mich., a subsidiary, to build a 10-inch merchant mill and work will begin soon with a view to completion by June 1, 1931. A 14-inch merchant mill now being built at the Detroit plant is expected to be in operation early in December. These two mills, with a new mill being installed in the plant at Weirton, W. Va., of the Weirton Steel Company, another subsidiary, will give the National Steel Corporation a wide range of merchant production.

### Aircraft Company Reports Good Business.

The Detroit Aircraft Corporation, Detroit, Mich., reports new business booked from September 10 to 20 as the best for any similar period in the history of the company. Gross sales amounted to \$91,705, which is 18 per cent ahead of any other 10-day period except when government contracts have been obtained, according to Karl S. Betts, sales manager. The report lists the sale of 11 ships, including 5 Lockheads.

### Concrete Reinforcing Steel Institute.

The semi-annual meeting of the Concrete Reinforcing Steel Institute, Chicago, will be held at Briarcliff Lodge, Westchester County, New York, October 20 to 22. As the American Iron and Steel Institute meets October 24 at the Hotel Commodore, New York, members and guests will have an opportunity to attend the sessions of both organizations.

### Official for Gas Companies.

W. Rawson Collier has been appointed vice-president and general manager of the Alabama Natural Gas Corporation, and the Mississippi Natural Gas Corporation, both Birmingham. Mr. Collier will have charge of all properties of the companies in Alabama.

### Sells Water Softening Department.

The Paige and Jones Chemical Company, New York, announces it has sold to the Permutit Company, New York, the Zeolite and lime soda water softening and filter departments of the business, including machinery, inventories, patterns and drawings. Heretofore it has manufactured Zeolite water softening apparatus as licensee under the Permutit Company's patents. It will continue the chemical branch of the business.

### Owen Bucket Branch Office.

The Owen Bucket Company, Cleveland, Ohio, announces a new branch office and warehouse at 36-25 Twenty-Second street, Long Island City, N. Y., in charge of Frank W. S. Elmes. Opening of this office follows the recent opening of offices in Chicago, Ill., and Oakland, Cal. Owen clamshell buckets are made in four types and in a range of sizes for rehandling work and excavating.

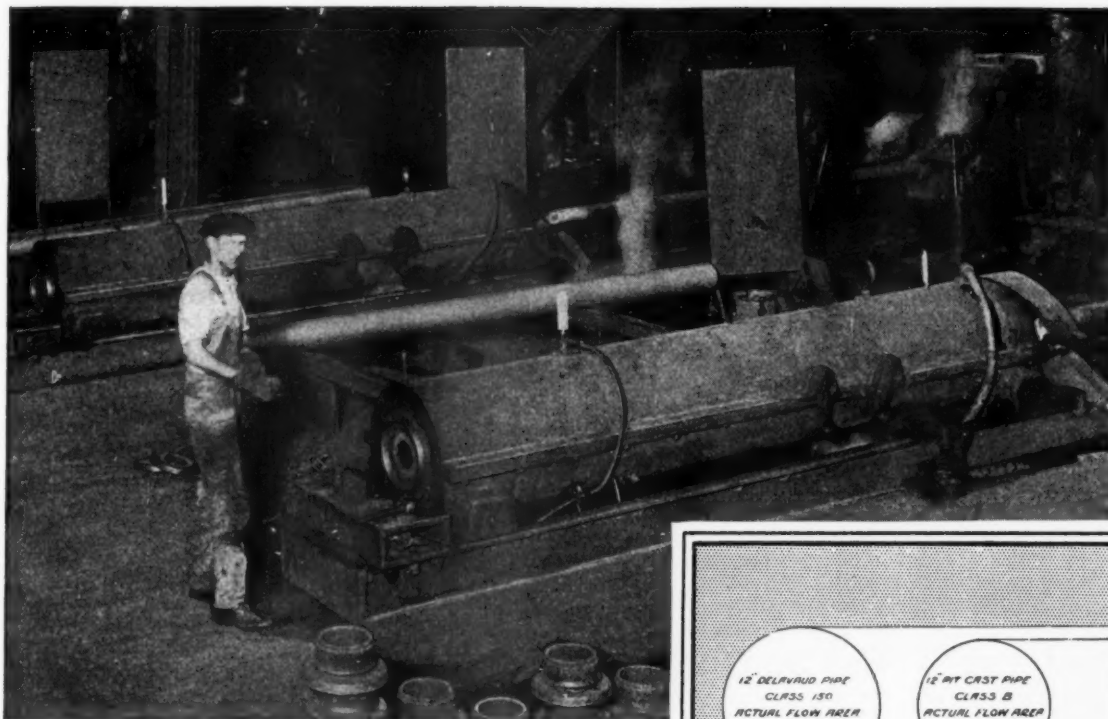
## Trade Literature

**Falk Speed Reducers.**—Bulletin No. 230, issued by the Falk Corporation, Milwaukee, Wis., manufacturer of Falk-Bibby couplings, heavy duty oil engines, herringbone gears and steel castings, describes and illustrates the company's complete standardized line of parallel shaft herringbone speed reducers, carried in stock for immediate shipment.

**Brown Pyrometers.**—The Brown Instrument Company, Philadelphia, has issued a catalog featuring Brown indicating, recording and automatic control pyrometers. A résumé of the theory and practice of applied pyrometry is set forth with descriptions and illustrations of instruments, thermocouples, protecting tubes and other required equipment. Southern branch offices of the company are located in Baltimore, Birmingham, Kansas City, St. Louis, Tulsa, Houston and El Paso.

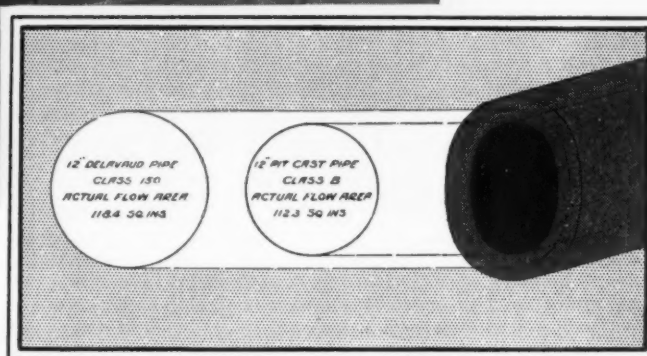
**Banking Theory and Practices.**—This is a volume of 562 pages by Luther Harr and W. Carlton Harris, assistant professors of finance of the Wharton School, University of Pennsylvania. The book is published by the McGraw-Hill Book Co., Inc., New York, and is priced at \$4.00. Its purpose, as outlined in the preface, is to discuss thoroughly and in an interrelated manner banking theory and practice, including operations of all departments of the modern American commercial bank as well as other related financial fields.

(Continued on page 76)



Above: The deLavaud machine in operation.

Below: Graphic illustration showing the greater carrying capacity of deLavaud pipe.



## *This stronger flexible deLavaud pipe has greater carrying capacity*

A cast iron pipe of greater strength, greater carrying capacity and uniform flexibility—such is deLavaud pipe. Its dense, even-grained metal shows an average tensile strength of 30,000 lbs. per square inch. This density results in reduced wall thickness for given pressures and increased carrying capacity of approximately 5% greater than that of pit-cast pipe.

The density and even-grained structure of deLavaud pipe metal result from its unique method of manufacture. This pipe is produced by pouring molten iron into a rapidly revolving cylindrical metal mold. Centrifugal force holds the metal against the sides of the mold with a pressure re-

sulting from a force many times greater than gravity. Immediately after coming from the machine, every length of deLavaud pipe is uniformly annealed in a specially constructed furnace where controlled heat eliminates all casting strains.

DeLavaud pipe is remarkably light in weight—easy and inexpensive to handle. Easy to cut and tap too. Manufactured in thicknesses and weights in strict accordance with the specifications of the American Water Works Association and the American Gas Association as well as the United States Government Specifications. The new deLavaud Handbook gives complete information. Write for your free copy today.

# United States Pipe and Foundry Co., Burlington, N.J.

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Philadelphia  
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Our pipe bears the "Q-Check"  
trademark of The Cast Iron  
Pipe Research Association

Dallas  
Birmingham  
Kansas City

Minneapolis  
Seattle

San Francisco  
Los Angeles



## TRADE LITERATURE

(Continued from page 74)

**Welders' Hand Book.**—A catalog just issued by the American Steel & Wire Company, Chicago, subsidiary of the United States Steel Corporation, comprehensively covers various methods now used for welding, and by illustration shows their application to different classes of work. The company manufactures Premier welding rods and electrodes.

**Gas and Air Power Shovel.**—The Bucyrus-Erie Company, South Milwaukee, Wis., has issued a booklet devoted to principles involved in construction and application of the "Gas + Air" shovel, with an outline of its characteristics and advantages. In addition to this type, the company produces shovels, cranes and draglines of various other types, sizes and power—straight gas, straight Diesel, "Diesel + air," electric, Diesel-electric and steam.

**Chemically Treated Lumber.**—Chemically preserved lumber for house and small building construction is said by T. F. Laist, architect, Yellow Springs, Ohio, to offer appreciable economies because of its longer life. Mr. Laist's views have been published by the Department of Commerce. Although treated lumber has long been used by railroads and larger consumers of lumber, its use in house and light building construction is of recent development, states the Department. The subject is discussed in a bulletin, "Treated Lumber—Its Uses and Economies," obtainable from the Government Printing Office.

## Public Utilities Earnings Rise

Gross earnings of public utility enterprises in July, exclusive of telephone and telegraph companies, are reported by the Department of Commerce at \$181,440,000, an increase of \$3,400,000 over July of last year and \$7,800,000 over the same month in 1928. Reports were received from 95 companies operating gas, electric light, heat, power, traction and water services. The gross for the first seven months of this year was \$1,372,940,000, or \$40,200,000 more than the same period in 1929, and \$87,000,000 more than the same in 1928.

## Textile Merger in South Carolina

**Tailors, S. C.**—Plans for the consolidation of the Piedmont Print Works, Inc., and the Southern Bleachery, Inc., both of Tailors, and the Rockland Finishing Company, Garnersville, N. Y., involve the purchase by the Piedmont-Southern group of the business, good will and equipment of the Rockland company. A large part of the Rockland machinery will be moved to Tailors, greatly increasing the capacity of the Piedmont-Southern plants, and enabling the consolidated company to handle a more varied line of

**Induction Motors.**—The Allis-Chalmers Mfg. Co., Milwaukee, Wis., is distributing leaflet 2124, devoted to type ARZ totally enclosed, fan-cooled induction motors manufactured at its Norwood Works, Norwood, Ohio. The motor is said to be especially suited for locations where dust, dirt, acid fumes or moisture tend to shorten the life of motor windings, being particularly adaptable to carbon black plants, textile mills, foundries, cement plants, chemical plants, etc.

**Port of Jacksonville.**—The 1930 book on the Port of Jacksonville, Fla., has been issued by the Jacksonville Port Bureau, C. E. Muller, secretary. As one of the important South Atlantic ports on the line of traffic from the Central and Southern sections of the United States to Europe, besides occupying a position at a traffic concentration point between industries of the United States and rapidly developing markets of South America, the port of Jacksonville offers many advantages.

**Automatic Water Still.**—A revised Barnstead Distilled Water Handbook, catalog B, describing the modern use of water distilling equipment in practically all fields, has been issued by the Barnstead Still and Sterilizer Co., Inc., Forest Hills, Boston, Mass. The publication is divided into seven sections: A Handbook of Water-Distilling Equipment for All Purposes; Water-Distilling Equipment for General Laboratory and Industrial Requirements; Water-Distilling Equipment for the Modern Hospital; Battery Service Stills; Mirror-Silvering and the Glass Industries; Retail Drug Field, and Home-Type Stills for Drinking Water and Household Use, etc.

finishing. The consolidation will be effected by the organization of the Southern Bleachery and Print Works, Inc., and stockholders of the Southern Bleachery, Inc., and the Piedmont Print Works, Inc., will be asked to exchange stocks in the old corporations for stock in the new.

## Packing Plant Addition Completed

**Auburndale, Fla.**—The Auburndale Citrus Growers Association has completed an addition to its packing plant here, increasing the output to 8 carloads daily. The extension is 100 by 200 feet, of tile and sheet iron, with wood floors. Tilden & McMichael, Winter Haven, Fla., were the architects; J. C. Morton, engineer, and Morton & Raymond, contractors, both of Auburndale. Hale & Van Borssum, Tampa, had contract for the heating and power plant; the Farley Electric Co. and the Holshaw Electric Co., both of Winter Haven, for electrical work, and W. H. Meers, Auburndale, for plumbing. Contracts for machinery were awarded to the Florida Citrus Machinery Co., Dunedin, Fla.; the Electric Fruit Marking Co., Los Angeles, Cal., and the Parker Machinery Co., Riverside, Cal.

## Protests Russian Lumber Imports

Formal request that unlawful imports of lumber be rigidly prohibited is planned by the National Lumber Manufacturers Association, which already has presented to Assistant Secretary Lowman of the Treasury a charge that sufficient evidence has been obtained to prove that all lumber shipments from the Russian White Sea area have been produced by convict labor. Under present practice, American lumber interests are obliged to prove that each Russian shipment is of convict-labor origin, and the association urges that hereafter the burden of proof shall be laid on Russia, to prove if possible, that such is not the case.

## Industrial Expansion in Kentucky.

Pronounced industrial expansion in Kentucky, according to the American Mining Congress, Washington, has followed industrial surveys of the cities and towns of that State. Since January, 1929, approximately 400 new industries are said to have been established. As its contribution to this work, the American Mining Congress, through its Southern division and its bureau of mining economics, has cooperated with the Kentucky Progress Commission. Dr. Henry Mace Payne, of the Mining Congress, has worked with Geoffrey Morgan, industrial secretary, and other officials of the Progress Commission.

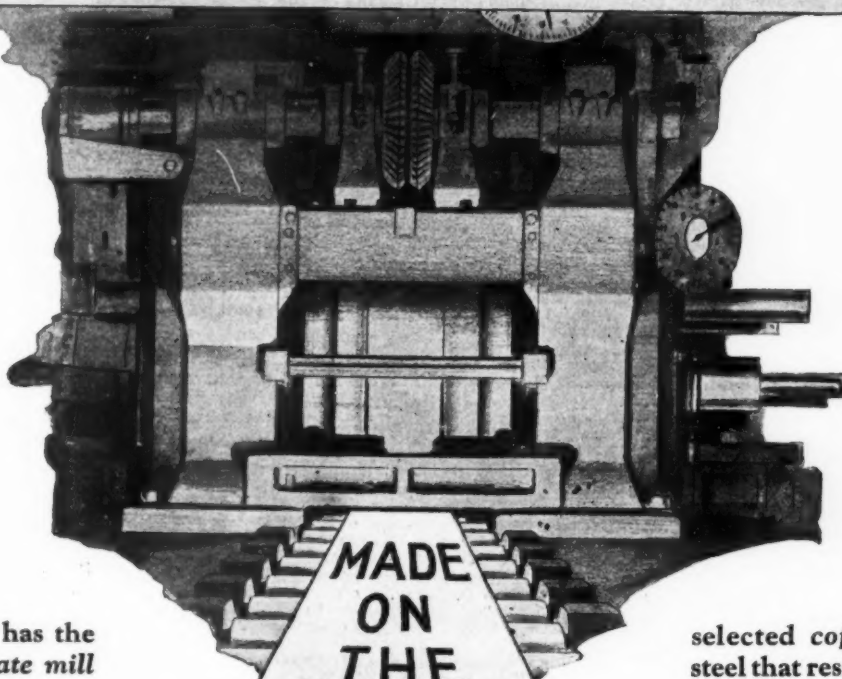
## Recommended That Cotton-mill Night Work for Women and Minors Be Discontinued

Discontinuance of night work for women and minors in American cotton mills was recommended by the directors of the Cotton Textile Institute at a special meeting in New York. By unanimous vote, the 45 directors present recommended that employment of women and minors under 18 years of age be discontinued between 9 p. m. and 6 a. m., not later than March 1, next. This recommendation followed similar action by the executive committee of the Institute, about two weeks ago.

## \$1,100,000 for Locomotives

**Roanoke, Va.**—The Norfolk & Western Railway Co. plans to build 10 large Mallet freight locomotives in the local shops of the company, at a cost of \$1,100,000, according to officials. The company also plans to expend \$250,000 for the extension of two storage warehouses at Lambert's Point, Norfolk.

# GULFSTEEL PRECISION PLATES



GULFSTEEL has the only universal plate mill in the South.

GULFSTEEL has the only plate mill in the United States with an automatic screw-down that controls rolling to thickness. The uncertainty of the old hand control has been eliminated.

GULFSTEEL Precision Plates are made from carefully

MADE  
ON  
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ONLY  
UNIVERSAL  
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selected copper-bearing steel that resists corrosion to the utmost. They form readily—weld smoothly.

..... For universal and sheared plate, physically right, metallurgically right, more accurately rolled and sheared, use GULFSTEEL Precision Plate.



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## GULF STATES STEEL COMPANY

BIRMINGHAM, ALABAMA

Pig Iron  
Billets  
Slabs

Wire Rods  
Bars  
Angles

Plates—Sheared and Universal  
Sheets—Black, Blue  
Annealed and Galvanized

Bright and Annealed Wire  
Galvanized Wire  
Barbed Wire

Wire and Rods, Straightened and Cut  
Woven Wire Fence  
Nails—all kinds  
Staples  
Bale Ties



# FINANCIAL NEWS

## Bond Issues Proposed

Ark., Van Buren — Consolidated School Dist. No. 16. J. P. Bingham, Supt., voted \$10,000 bonds.

Fla., Tavares — City Council passed resolution authorizing \$15,000 street paving bond issue.

Ga., Thomasville — City voted \$125,000 school bonds and \$10,000 bridge bonds. 8-14

Ga., Toccoa — Stephens County Commrs., R. L. Elrod, Chmn., called election for Nov. 4 on \$60,000 hospital bonds.

La., Alexandria — Rapides Parish School Bd. called election for Oct. 30 in Rigolette School Dist. No. 11 on \$75,000 school bonds.

La., Baton Rouge — City Council called election for Oct. 21 to vote on \$17,500, not to exceed 5% sewerage Dist. No. 2 bonds, on \$180,000, not to exceed 5% bonds for extending and improving city sewerage system, on \$92,500, not to exceed 5% sewerage Dist. No. 1 bonds.

La., Clinton — East Feliciana Parish. reported, voted Oct. 14 on \$27,500, 6% water works bonds.

La., Franklinton — Washington Parish School Bd., D. H. Stringfield, Supt., opens bids Oct. 20 for \$15,000, 5½% bonds.

La., Hahnville — St. Charles Parish Police Jury holds election Nov. 6 on \$100,000 jail bonds. 9-11

La., Ruston — Lincoln Parish School Bd. opens bids Oct. 21 for \$10,000 school bonds.

Miss., Greenwood — City voted \$55,000 paving bonds. 9-11

Miss., Greenwood — City, Mayor and Commrs., Miss Bonner Duggan, Clk., receives bids Oct. 7 for \$55,000, \$1000 denom. paving bonds. 9-11

Mo., Clarkton — City, A. V. Rice, Mayor, plans issuing \$20,000 water system bonds.

N. C., Southport — Brunswick County Commrs., W. H. Walker, Clk., opens bids Oct. 7 for \$45,000, 6%, \$1000 denom. refunding bonds.

Okla., Mangum — City votes Oct. 14 on \$105,000 water system improvement bonds.

Tenn., Knoxville — City, J. C. Borden, Director of Finance, plans selling \$500,000 of \$900,000 Henley Street Improvement bonds. 9-4

Tex., Beaumont — City, Paul H. Millard, Mgr., may vote on \$1,400,000 water works bonds.

Tex., Brady — McCulloch County Commrs. Court probably call election on creation of special road district to vote on \$655,000 bonds to pave Highway 9 and 10.

Tex., Cotulla — LaSalle County, George Welhausen, Judge, votes Oct. 18 on \$150,000 courthouse and jail bonds.

Tex., Houston — City, reported, plans \$1,000,000 bond issue for junior college and municipal stadium.

Tex., San Diego — San Diego Independent School Dist. soon offer \$320,000 bonds for sale.

Va., Front Royal — Town, Frank B. Dutrow, Mgr., opens bids Oct. 27 for \$58,000 4½% water department bonds. 9-11

Va., Orange — Town, Dr. Frank B. Perry, Chmn., Bond Committee, rejected bids for \$150,000, 5% coupon bonds, including \$75,-

000, \$1000 denom. sewerage, \$75,000, \$500 denom. water improvement.

## Bond Issues Sold

Ark., Okolona — Okolona Special School Dist., Clark County, reported, sold \$35,000, 6% school bonds to M. W. Elkins & Co., Little Rock.

Fla., Jacksonville — Bd. of Bridge Bond Trustees purchased \$85,000 St. Johns River toll bridge bonds of Duval County Commrs., at \$96.529.15, including \$10,625 and accrued interest.

Ky., Covington — Magus & Co., Cincinnati, reported, purchased \$500,000, 4¼%, refunding bonds.

La., Carencro — City, Mayor and Bd. of Aldermen sold \$6000, 6% water main extension bonds to Bank of Lafayette & Trust Co., Carencro, at par.

La., Leesville — Vernon Parish Police Jury sold \$50,000 sub-road dist. bonds of Road Dist. 1 to Merchants & Farmers Bank & Trust Co., Leesville.

Miss., Canton — Madison County Road Dist. No. 4 sold \$40,000 semi-annual road bonds to Meridian Finance Corp., Meridian.

Miss., Greenwood — City sold \$26,000 paving bonds to First Securities Co., Memphis, Tenn., for \$77.50 premium.

Miss., Holly Springs — City sold \$60,500 coupon paving bonds to Saunders & Thomas, Memphis, Tenn., at par plus all expenses.

Mo., Mountain Grove — City Council sold \$20,000, 5% water works bonds to Prescott, Wright, Snider Co., Kansas City, Mo., at bonus of \$25.20 per thousand. 9-18

North Carolina — State of North Carolina, Capt. Nathan O. Berry, State Treas., Raleigh, sold \$5,250,000 anticipation notes to Chas. D. Barney & Co., New York, at 2.46% interest rate.

N. C., Wilson — City sold \$300,000, 4¼% electric light bonds to Eldridge & Co., New York, at \$2730 premium.

N. C., Williamston — Town, Bd. of Commrs., G. H. Harrison, Town Clk., sold \$35,000, 6% street improvement bonds to Weil, Roth & Irving Co., Inc., Cincinnati, Ohio, at \$35.510. 9-18

N. C., Asheboro — Randolph County Commrs., S. C. Frazier, Clk., sold \$100,000, 4 school bonds to First Detroit Co., Detroit, at \$1890 premium.

Okla., Poteau — Le Flore County School Dist. No. 67 sold \$10,000 bonds to First National Bank & Trust Co., Tulsa, at \$17.75 premium.

S. C., Travellers Rest — Greenville County Bd. of Education, James F. Whatley, Supt., Greenville, sold \$30,000, 6% school bonds, at \$2470 premium, to Alester G. Furman Co., Greenville. 8-28

S. C., Walhalla — Oconee County sold \$125,000 road bonds to Caldwell & Co., Nashville, Tenn., and Robinson-Humphrey Co., Atlanta, Ga., on joint bid of \$62.50 premium, 4¼% interest.

Tenn., Newbern — J. C. Bradford & Co., Nashville, recently purchased \$15,000, 6%, \$1000 denom. school bonds.

Tex., Dalhart — Draper School Dist., Dallam County, sold \$10,000, 5% school bonds to State of Texas, Austin.

Tex., Fort Worth — Tarrant County Commrs. Court sold \$900,000, 4¼%, \$1000 denom. direct obligation road bonds to G. H. Walker & Co., St. Louis, Mo., and others.

Tex., Liberty — Liberty County Commrs. sold \$500,000, 5% road bonds to Security Trust Co., Austin. 9-11

Tex., San Benito — San Benito School Dist. sold \$320,000 bonds to Sutherland Barry & Co., Inc., New Orleans, La., at about 96.15 cents on the dollar. 4-17

## New Financial Corporations

Ark., Little Rock — Central Loan & Investment Co. being formed with C. C. Kavanaugh, V.-Pres., Federal Bank & Trust Co., president.

La., Independence — Independence Bank & Trust Co., capital \$550,000, chartered; Adam Kluchin, Pres.; Ivy Hoover, Cashier.

Miss., Scooba — Bank of Scooba, capital \$15,000, chartered; C. S. Field, E. T. George.

Central Finance Co., Inc., 708 Baronne St., Louis Lob and Adolph K. Scharff, New Orleans, increasing capital to \$250,000.

Farmers & Merchants' Bank, C. R. Zinn, Pres., Reedsville, W. Va., and Bank of Masontown, S. L. Coburn, Pres., Masontown, W. Va., completed plans for consolidation under charter of Farmers and Merchants Bank and will bear that name.

First National Bank, J. J. Harry, Pres., and National Bank of Gulfport, L. N. Dantzer, Pres., merging under name of First National Bank.

## United Gas Corporation Report.

Property and operating statistics and financial statements as of July 31, 1930, of the United Gas Corporation, natural gas subsidiary of the Electric Power & Light Corporation, New York, are set forth in a report to stockholders. Through subsidiaries, the company markets natural gas for domestic and industrial consumption in a large portion of the territory bounded by St. Louis and Memphis on the north, Atlanta and Birmingham on the east, Wichita Falls, Fort Worth, Dallas, Austin and San Antonio on the west and by New Orleans, Laredo, Brownsville and Monterey on the south, including portions of Texas, Louisiana, Arkansas, Mississippi, Alabama, Georgia, Tennessee, Missouri and the Republic of Mexico. A construction program involving \$20,000,000 is partially complete. For the year ended July 31, 1930, the United Gas Corporation, which began business June 3, 1930, and all companies of which it had voting control, earned income applicable to the payments of dividends on \$7 preferred stock of \$9,655,922, as compared with annual dividend requirements of \$2,653,889.

## DELAWARE REGISTRATION TRUST CO.

J. Ernest Smith, President and General Counsel.  
Chas. Warner Smith, Vice-President.  
Harry W. Davis, Secretary and Treasurer.

## Corporate Financing Arranged

Mergers and Reorganizations Effected  
Capital furnished for both new and old enterprises

WILLIAM AKERS

Long Distance and Local Phone Walnut 3186

1314-15 Atlanta Trust Co. Bldg.

ATLANTA, GEORGIA

## SCHOOL DESKS

*H. H. Andrews & Co.*  
CHICAGO  
107 So. Wabash Avenue

## We Buy Bonds

City, County, School and Road from  
Municipalities and Contractors

WRITE

THE PROVIDENT SAVINGS BANK & TRUST CO.  
CINCINNATI OHIO

## Decades of successful cooperation

There are many great Southern industries which, after many years still find their connection with First and Merchants an indispensable part of their business.

*We shall be glad to demonstrate to you that we can be of similar value to your business.*

### FIRST AND MERCHANTS National Bank of Richmond

John M. Miller, Jr., President

Capital and Surplus Six Million Dollars

## HELPFULNESS

is the motto of this Bank.

Let us tell you about it.

### BALTIMORE COMMERCIAL BANK

GWYNN CROWTHER, President

26 South Street, Baltimore, Md.

Capital and Surplus \$1,350,000.00 Member Federal Reserve System

## "The Early 1880's in Baltimore"

Southern men and women who lived in, or visited Baltimore in the period when this Company was established—which was the year of 1884—will be interested, we believe, in our anniversary book "The Early Eighties: Sidelights on the Baltimore of forty years ago." A copy will be sent upon request.

### MERCANTILE TRUST COMPANY OF BALTIMORE

Resources \$24,000,000 A. H. S. POST, Pres. F. G. BOYCE, Jr., Vice-Pres.

## DELAWARE CORPORATIONS

ORGANIZED

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Registered in Other States

"DIGEST" OF DELAWARE CORPORATION LAW with forms for incorporating, also pamphlet on "Stock Without Par Value under Delaware Law" on request.

### NEW EDITION

(With 1929 Amendments and Annotations to date)

### DELAWARE CORPORATIONS AND RECEIVERSHIPS

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Text of law, fully annotated, with Forms for organizing Delaware Corporations

Buckram Bound 358 Pages  
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318 Delaware Trust Building

Tel. Wilmington 8305

Wilmington, Delaware

## THE BANK OF ALABAMA

ENSLEY, ALABAMA

R. A. TERRELL.....President  
J. W. MINOR.....Vice-President  
FOSTER HAMILTON.....Cashier

We Solicit Your Business

### HAVE YOU BONDS FOR SALE?

WE BUY ALL CLASSES OF MUNICIPAL BONDS,  
INCLUDING CITY, COUNTY, SCHOOL,  
PAVING, ROAD AND DRAINAGE

*The Hanchett Bond Co. Inc.*

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### JOHN NUVEEN & CO.

First National Bank Building

CHICAGO

We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.

Write us if you have bonds for sale.

**Taylor,  
Wilson  
& Co. Inc.**  
INVESTMENT SECURITIES

### WE BUY MUNICIPAL BONDS

Public officials are invited to avail themselves of our facilities for preparation of legal details.

Your inquiry receives prompt attention  
701-2 Dixie Terminal Bldg. CINCINNATI



### \$72,500,000 Oil Deal

Tulsa, Okla.—Following the recent action of stockholders of the Sinclair Consolidated Oil Corp., New York, in approving the sale of the company's half-interest in the Sinclair Crude Oil Purchasing Co. and the Sinclair Pipe Line Co. to the Standard Oil Company of Indiana, Chicago, the deal was completed by the payment of \$72,500,000. This transaction gives the Standard Oil of Indiana full ownership of the two companies, it already having owned a half-interest. The names of the two companies will be changed, respectively, to the Stanolind Crude Oil Purchasing Co. and the Stanolind Pipe Line Co.

### \$519,000 Y Building Contract

Dallas, Tex.—General contract to erect a new 15-story building on Ervay street, near Patterson avenue, this city, has been awarded by the Young Men's Christian Association, Edward T. Moore, chairman of the building committee, to Nathan Wohlfeld, local contractor, at \$519,682. Contract for plumbing and heating was awarded to the Federal Plumbing & Heating Co., at \$80,850, and for electrical work to the Electric Construction Corp., at \$20,500, both of Dallas. The building will be 134 by 112 feet.

of brick, stone, steel and reinforced concrete. Anton F. Korn, Jr., Dallas, is the architect.

### Ship Line to Norfolk Interests

Norfolk, Va.—The Southgate-Nelson Corporation, organized about a year ago to operate the American-Hampton Roads Line of steamers between Hampton Roads, north Atlantic ports and the United Kingdom, and largely owned by the Charles Nelson Company, San Francisco, Cal., has passed to the control of Norfolk interests through a stock purchase. New officers have been elected as follows: W. F. Taylor, president; A. T. Ross, vice president in charge of operations; Charles L. Kaufman, secretary and general counsel; B. H. Gouchner, manager, and R. L. Gray, auditor.

### Contract for \$1,000,000 Hotel

Greensboro, N. C.—General contract to erect a new \$1,000,000 hotel here has been awarded to the Angle-Blackford Co., Greensboro, by the Jefferson Hotel Corp., H. A. Moffitt, president, High Point, N. C. The building will be 13 stories and basement, of reinforced concrete, steel, brick, tile and stone, with built-up roof. Herbert Hunter, High Point, is the architect.

### Kentucky Oil Well Comes In

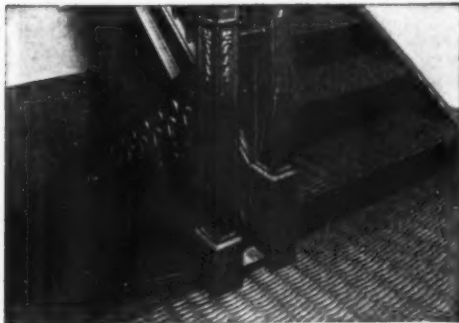
Horse Cave, Ky.—An oil well of 1000 barrels daily capacity has been brought in near Horse Cave and the Stol Oil Co. is piping it to storage tanks here. It is understood that firms manufacturing large tanks, pipe, oil rigs and other oil field equipment may find sale for their products. Business communications may be addressed to the Horse Cave Chamber of Commerce.

### Completing Refrigerating Plant

Harlingen, Tex.—The Central Power and Light Co., San Antonio, is completing a \$240,000 cold storage and refrigerating plant here, which is said to be the largest of its kind in the valley. It is of brick and concrete and will provide storage for several carloads of fruits and vegetables. J. W. Sweeney is the manager.

Corpus Christi, Tex.—Preliminary plans were recently approved and working drawings are now being prepared for a school, bishop's home and church for the Catholic Church, Rt. Rev. E. V. Ledvina. The group is estimated to cost \$700,000 and C. L. Monnot, Oklahoma City, Okla., is the architect.

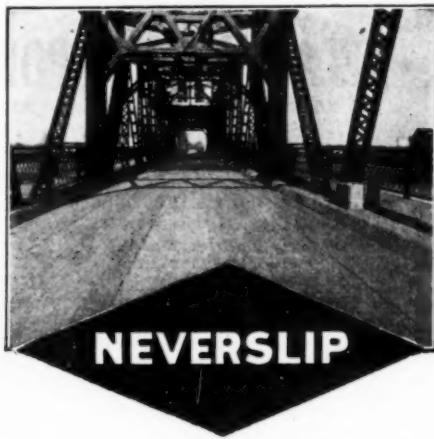
## Buy "traction"— an investment in underfoot safety!



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—Made by pioneers in the field of rolled steel floor plates, NEVERSLIP PLATES may be identified by the "Perfect Diamond Pattern" originated by us over 30 years ago, which has never been surpassed for protection against slippage.

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They are rolled of fine open hearth steel, and thousands of them have been in service for an impressive length of time throughout Industry.

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# AMERICAN PRESSED STEEL CO.

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Representatives in Principal Cities.

## EVERY BUSINESS HAS ITS BARREN ACRE

IN A DAY when the battles of business are won or lost on the fraction of a cent, the item of floor space takes on importance. National concerns require many thousands of square feet to do business. With rentals at a premium, executives are giving this subject their sharpest scrutiny.

In order to properly store and display your product, you multiply floor space by means of shelves and counters. These must have strength without bulk. They should be quickly adaptable, and offer minimum fire-hazard. So modern business insists upon *steel* equipment.

For greatest efficiency, this equipment should be tailored to the particular requirements of your business. Here Lupton shelving-engineers can help you greatly. Their experience covers many industries.

Hardware dealers, the country over, are modernizing their stores with Lupton hardware shelves and counters. Lupton systems for auto parts, used by dealers practically everywhere, have speeded service on your car. Other specialized Lupton shelving-equipment is used by grocery, drug and dry goods stores, chain-restaurants, printers, textile mills, public libraries, and many others. Recently, Lupton designed shelving for a shoe-chain which gave each store a whole extra row of shoes in the same stock space.

It is quite possible that Lupton shelving-engineers may find a barren acre in your own business. They may save you thousands of dollars. They will gladly consult with you, without charge. When you write for information, enclose a copy of your floor plan. David Lupton's Sons Co., 2243 East Allegheny Avenue, Philadelphia, Pa.

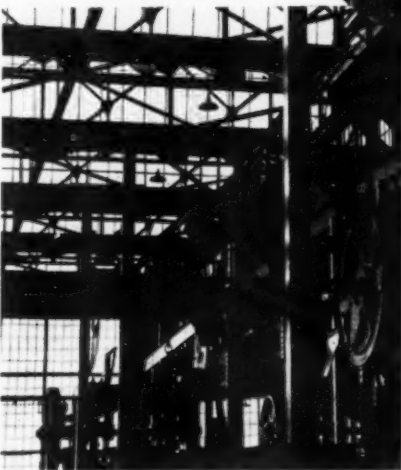
**L U P T O N**  
WHERE STEEL IS FUSED WITH SINCERITY



Above — Lupton Automotive Display Equipment including Unit Shelving, Display Counter, Tire Racks, and Display Shelving.



Lupton Home Casements provide a pleasant view of trees and flowers from an airy and restful bedroom.



Lupton Steel Windows bring welcome light and air to the Edw. C. Budd Mfg. Co., Philadelphia. The Ballinger Co., Architects. Wark Co., Contractors.





# PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



Bids close October 7, 1930.

U. S. Engineer Office, Memphis, Tenn. Sealed bids, in duplicate, will be received here until 2 P. M., October 7, 1930, and then opened, for constructing and delivering afloat at Memphis, Tenn., two steel hull pile-drivers. Information on application.

Bids close October 20, 1930.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., Sept. 22, 1930.—SEALED BIDS will be opened in this office at 3 p. m., Oct. 20, 1930, for the extension and remodeling of the U. S. post office, etc., at Pittsfield, Mass., including the demolition and removal of existing frame building on the site. Drawings and specifications, not exceeding six sets, may be obtained at this office in the discretion of the supervising architect, by any satisfactory general contractor. JAS. A. WETMORE, Acting Supervising Architect.

Bids close October 7, 1930.

DEPARTMENT OF INTERIOR, Washington, D. C., September 9, 1930. Sealed bids in duplicate, subject to the conditions contained herein, will be received until 2 P. M., Tuesday, October 7, 1930, and then opened, for (1) Furnishing all labor and materials for performing all work for the construction (including all mechanical equipment) of Building No. 1, and for Buildings Nos. 2 and 3 of the Women's Dormitory group at Howard University, Washington, D. C. This work will include excavating, reinforced concrete construction, brick work, stone work, floor and wall tile, miscellaneous iron and steel work, slate and metal roofing, lathing and plastering, carpentry, electric elevators, plumbing, heating, electrical installation, finish grading, concrete walks and landscaping. (2) Kitchen equipment, furniture, shades, draperies, etc., furnished and installed. Proposals will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract, and in making awards the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. Separate and distinct appropriations having been made for dormitory No. 1 and for dormitories Nos. 2 and 3, it will be necessary, in order to avoid any violation of Sections 3678 and 3733 of the Revised Statutes, to invite bids and enter into contracts which will specify the consideration for dormitory No. 1 separate and apart from the consideration for dormitories Nos. 2 and 3. As contractors may be able to make a better price to the Government if assured of the contract for the whole three buildings, there is no objection to having bidders submit bids for the two projects separately and, also, to state bid prices respectively for the two projects based on an award for all three buildings. It is desired that these buildings be completed at the earliest practicable date and therefore time will be considered an element in awarding such contracts. At the discretion of the Secretary, drawings and specifications may be obtained upon application to the Department. A certified check in the sum of \$100, payable to the Treasurer of the United States, is required as security for safe return of the drawings and specifications within ten days after the date of opening proposals. Each bidder must accompany his proposal with detailed financial statement of his construction organization. The Government reserves the right to reject any or all bids or waive technical defects. The Government also reserves the right to award the contracts for these buildings either as separate contracts for each of the two projects to separate bidders, or as separate contracts for the two projects combined under one bid to one bidder. Envelopes containing bids must be sealed, marked "Bid for construction, equipment and furnishing of women's dormitory building 1 and buildings 2 and 3, Howard University, Washington, D. C., to be opened October 7, 1930," and addressed to "The Secretary of Interior, Room 6119, Interior Department Building, Washington, D. C." John H. Edwards, Assistant Secretary of Interior.

## GENERAL INFORMATION

### About Proposal Advertising in Manufacturers Record

PUBLICATION DAY: Thursday.  
FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M. Tuesday, forward by night letter or air mail when possible.

### THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

Bids close October 7, 1930.

U. S. Engineer Office, 300 Custom House, Baltimore, Md. Sealed bids will be received here until 3 P. M., Eastern Standard Time, October 7, 1930, and then publicly opened, for dredging approximately 1,113,232 cubic yards of material in the entrance to and through Craighill section and the Craighill-Cutoff angle and approximately 192,635 cubic yards in the Ferry Bar section of channels leading to Baltimore, Md.

Bids close October 10, 1930.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., September 26, 1930.—SEALED BIDS will be opened in this office at 3 p. m., October 10, 1930, for miscellaneous changes in hearing rooms and cafeteria, new partitions, cabinets, etc., in the U. S. Internal revenue bldg. (building, bureau of internal revenue), Washington, D. C. Drawings and specifications may be obtained at the office of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close October 7, 1930.

### Bridge Work

STATE OF MARYLAND  
STATE ROADS COMMISSION

#### NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for removing existing bridge superstructure as follows:

Removal of existing bridge superstructure over Deer Creek on the road from Churchville to McCann's Corner

will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M. on the 7th day of October, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.  
BY ORDER of the State Roads Commission this 23rd day of September, 1930.

G. CLINTON UHL, Chairman.

L. H. STEUART, Secretary.

Bids close October 7, 1930.

U. S. Engineer Office, Memphis, Tenn.—Sealed bids, in duplicate, will be received here until 2 P. M., October 7, 1930, and then opened, for constructing and delivering afloat at Memphis, Tenn., one steel hull grader derrickboat. Information on application.

Bids close October 14, 1930.

### Virginia Highway Work

Richmond, Va.

Tuesday, 10 A. M., office of the Va. Dept. of Highways, Richmond, Va. Rt. 10, Proj. 26, County Surry & Pr. Geo., Widening Br. 1—20 ft., Cu. Yds. A Conc. 21.4, B Conc. 27.3, Lbs. Reinf. Steel 1500, Lin. Ft. Piles 320. Rt. 10, Proj. 34, County Norfolk, 1.4 mi. Conc. Sq. Yds. Conc. 9891, Cu. Yds. Excava. 7511. Rts. 10, Projects 58B1-58B2, County Pr. Geo., Widening two bridges, 1—40 ft., 1—30 ft., Cu. Yds. A Conc. 148.9, Lbs. Reinf. Steel 19,615. Rt. 10, Proj. 441, County Pr. Anne, 3 Mi. Conc., Sq. Yds. Conc. 16,492, Cu. Yds. Excava. 5031, Lin. Ft. Pipe 288. Rt. 527, Proj. 657, County Nansemond, 3.8 Mi. Conc. or Mac., Cu. Yds. Excava. 21,114, Lin. Ft. Pipe 270, 180, Cu. Yds. Conc., Lbs. Reinf. Steel 9276, Lin. Ft. Piling 3000, Sq. Yds. Conc. or Mac. 40,418. Details obtainable upon request.

Bids close October 27, 1930.

### Street Improvements

Cuthbert, Ga.

Sealed proposals will be received by the Mayor and Aldermen of the City of Cuthbert, Georgia, at the City Hall, up to 2 P. M., October 27, 1930, at which time they will be opened and considered, for furnishing all labor, material and equipment, and constructing Street Improvements on the following streets of Cuthbert:

Dawson Street from Plum Street to Elm Street.

Pearl Street from Plum Street to Peachtree Street.

College Street from Lumpkin Street to Plum Street.

Plum Street from Dawson Street to Pearl Street.

Peachtree Street from Dawson Street to Pearl Street.

Depot Street from Maple Street to Dawson Street.

Court Street from Pearl Street to Pine Street.

The above work will consist of approximately the following quantities:

2,600 Cubic Yards of Roadway Excavation.

10,272 Square Yards of Roadway Pavement.

4,142 Lineal Feet of 6 in. x 18 in. Concrete Curb and Gutter.

270 Lineal Feet of Concrete Header.

350 Lineal Feet of 15 in. Storm Sewer.

1 Storm Sewer Inlet.

2 Storm Sewer Manholes.

Plans and specifications are on file with the City Clerk at the City Hall in Cuthbert and the City's Engineers, J. B. McCrary Engineering Corporation, Atlanta, Georgia. Copies of specifications may be secured from Engineers on deposit of \$5.00, which will be returned to bona fide bidders. Copies of plans may be secured from Engineers on payment of \$5.00, WHICH WILL NOT BE RETURNED.

Each bid shall be accompanied by a certified check or bidder's bond acceptable to the Mayor and Aldermen for 5% of amount bid, made payable to the City of Cuthbert, said check or bond to be forfeited to said city in event contract is awarded and contractor fails to make bond. A bond for the faithful performance of contract will be made by contractor in the amount of 100% of contract price.

The Mayor and Aldermen reserve the right to reject any and all bids, or to award the contract as they believe will best serve the interests of the City of Cuthbert.

By R. A. PATTERSON, Mayor.

A. C. MOYE, JR., Clerk.

J. B. MCCRARY ENGINEERING CORP.,  
Engineers,  
Atlanta, Georgia.

Bids close November 6, 1930.

**Earthen Dam**

Brownwood, Texas.

Sealed proposals will be received up to 2 o'clock P. M. November 6, 1930, by the Board of Directors of Brown County Water Improvement District Number One, Brownwood, Texas, for the constructing of an earthen Reservoir Dam and appurtenant works across Pecan Bayou, about 8 miles above the city of Brownwood, Brown County, Texas, including a spillway for Reservoir. Such dam will involve the following principal quantities:

Dam Embankment....	730,000 Cubic Yards
Excavation for Cut-off	
Trench and for Conduits .....	96,000 " "
Riprap .....	15,000 " "
Gravel Blanket .....	5,000 " "
Rock Fill .....	5,000 " "
Concrete in Conduits, Gate Wells and Gate House .....	7,500 " "
Concrete in Spillway Channel .....	3,600 " "
Steel Sheet Piling....	8,000 Square Feet
Reinforcing Steel....	1,344,000 Pounds

The foregoing quantities are approximate, and are submitted only for the purpose of enabling prospective bidders to estimate the probably volume of the contract. Plans and specifications can be secured at the office of the Engineer of the District at Brownwood. A deposit of \$30.00 must accompany request

for a set of plans and specifications, which deposit will be returned to those submitting bona fide bids and upon return of such plans and specifications by others who have been furnished same.

Proposals shall be accompanied by a certified or cashier's check in the sum of five (5%) per cent of the total estimated amount of the bid, based upon the schedule of approximate quantities shown on the form of proposal that will be furnished to the bidder by the Engineer of the District.

Checks of unsuccessful bidders will be returned to them 3 days after bids are opened, except that the checks of the 3 lowest bidders will not be returned until after the contract has been executed and bond made, which bond shall be not less than 50 per cent of the amount of the contract, and each bidder shall accompany his bid with a certificate from a Surety Company duly authorized to do business in this State, stating that such Surety Company will provide such bidder with a bond in such sum as is required and in accordance with the provisions of the said specifications, conditioned for the faithful performance of the contract. Such contract shall be signed within ten (10) days from date of award. The District reserves the right to reject any or all bids.

**BROWN COUNTY WATER IMPROVEMENT DISTRICT NO. 1.**

F. S. ABNEY, President.

H. G. LUCAS, Secretary.

D. W. ROSS,

Engineer of District.

Brownwood, Texas, September 15, 1930.

Bids close October 6, 1930.

**Fire Truck**

Summerville, S. C.

The Mayor and City Council of the town of Summerville, S. C., will receive bids until 10 A. M. October 6, 1930, for furnishing one Chemical Combination Fire Truck, to meet Underwriters' Specifications and Approval.

Bids close November 4, 1930.

**Notice for Proposals on Utilities**

Morehead City, N. C.

Sealed proposals will be received by the City of Morehead City, North Carolina, at Seven (7.00) o'clock P. M. on November 4th, 1930, at the office of the City Clerk for the purchase of Electric and Water Systems now owned and operated by that city.

Should an acceptable proposal be received, this will be submitted to the voters for ratification.

A certified check in an amount of not less than Five Thousand (\$5,000.00) Dollars is required, and the right is reserved to reject any or all proposals.

HON. K. P. B. BONNER, Mayor  
Further information may be obtained from the undersigned:

UTILITIES ENGINEERING &  
MANAGEMENT COMPANY,  
917 Johnston Building,  
Charlotte, N. C.

# CLASSIFIED OPPORTUNITIES

**MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES**

**FOR SALE**—5000 acres oil and gas leases on structure, settled production. Royalties and mineral rights on large tract. Complete data furnished on request.

W. P. HARLEY, Bowling Green, Ky.

**KAOLIN**

**FOR SALE**—400-acre Kaolin within ten miles of Augusta, Georgia, two miles from railroad. Address

B. L. MIMS, Edgefield, S. C.

**ROCK QUARRY**

**FOR SALE**—16 acre rock quarry, Irmo, S. C., on railroad. Address

A. C. WINGO,  
3005 Columbia Avenue, Columbia, S. C.**TIMBER AND TIMBER LAND**

**CUT-DOWNS FOR SALE**—3/16" air dried cottonwood, 3" to 10" wide and 10" to 20" long. Will saw to your sizes. Missouri Veneer Company, Mokane, Missouri.

**EXCEPTIONAL OPPORTUNITY**—72,000 acres desirable second growth pine land in North Florida, \$3.50 an acre. Property increasing rapidly in value and good income now available from conservative turpentine operations. Taxes moderate.

THE JAS. D. LACEY CO.,  
Barnett Bldg., Jacksonville, Fla.

**SOUTH CAROLINA TIMBER FOR SALE.** Thirty-five million feet on railroad and paved highway and very near deep water port. Tupelo and Red Gum. Price \$190,000.00. Reasonable terms.

Five million feet on highway; Pine, Gum and Maple. A bargain at \$10,000.00. Cash. Address P. O. Box 2854, St. Petersburg, Fla.

**HARDWOOD LUMBER**

**TO FORWARD LOOKING** Radio or Furniture Manufacturers: Hardwood Lumber prices are low now, but don't overlook the point that this condition is TEMPORARY. An opportunity is offered to secure a steady FUTURE supply of Southern Hardwoods at MANUFACTURING COST. INSURE your SUPPLY and assure yourself of LOW COST. Address No. 9040, care of Manufacturers Record, Baltimore, Md.

**FARM, FRUIT AND TRUCK LANDS****FLORIDA**

5000 ACRES of IDEAL TUNG OIL and general Agriculture land at a real bargain price if sold quick.

A. A. GEITGEY, Glen St. Mary, Florida.

**NOW IS THE TIME** for citrus investment in South Florida. First—The business is on a better business basis than ever before. Second—The Del Monte, Polk and other large canneries are utilizing all low grade fruit for canning purposes. Third—Prices on citrus groves are lower than ever before.

50 ACRES in grove, about 1/2 orange and 1/2 grapefruit. Oranges are about 1/2 Valencia and 1/2 Pineapple. Trees range in age from 6 to 20 years. 50 acres cleared and fenced. 50 acres uncleared. Land has double Orange River frontage of about 1/2 mile. Improvements consist of artesian well, tenant house, storage warehouse and barn. Seven miles from court house, 1 mile from highway. Price \$40,000.00. Terms.

76 ACRES in grove. 1675 grapefruit trees. 950 pineapple, orange trees, 1125 Valencias. 96 acres uncleared, improvements, 5 artesian wells, 4 tenant houses, all necessary tools, mules, tractor and spraying outfit. Located on hard road 4 miles from court house. 1 mile highway frontage. Price \$70,000.00. Terms.

100 ACRES in grove, river frontage, double hard road frontage, about 1/3 orange and 2/3 grapefruit, estimated crop 15,000 boxes. 3 tenant houses, barns, farming implements, 3 artesian wells; no extra land. 14 miles from court house. Price \$80,000.00. Terms.

100 ACRE GROVE, 1600 grapefruit, 2600 orange trees. 80 acres cleared and fenced, 120 acres uncleared. Residence \$15,000.00; 3 tenant houses, 2 barns. Estimated crop 16,000 boxes grapefruit, 3000 boxes oranges. 7 miles from Arcadia on paved road. Price \$90,000.00. Terms.

ABOUT 240 ACRES, 35 in grove, about 2500 trees, 1/3 grapefruit, about 400 tangerines. 56 acres, 31 acres in bearing grove, 1/3 grapefruit. Price \$600 per acre. Total acreage in grove 65. These properties are not joining but decidedly accessible. Located on Claosahatchee River 25 miles from Ft. Myers, 3 miles from 2 packing houses. Terms.

P. JOHN HART REALTY CORP.,

P. O. Arcade,  
Fort Myers, Fla.**FARM, FRUIT AND TRUCK LAND****LOUISIANA**

**ST. CHARLES PARISH, LOUISIANA**, offers opportunities in cattle ranches, agricultural and industrial sites. St. Charles Bank & Trust Co., Sellers, La.

**MISSISSIPPI**

**"PECAN ORCHARD** for sale—97 acres on fine highway in edge of good town. Trees beginning to bear. Ideal location adjoining Lake Yearger, etc. Prices and terms on request. Bass Pecan Co., Lumberton, Miss.

**"1040 ACRES FINE LAND**—600 acres in cultivation. 8 tennant houses. Famous Jackson Highway through it. Fine for pecans, fruit, truck, dairying, farming. 6 miles good town. Fine school, church, health condition. \$20 per acre will buy it on account of owners death.

BASS PECAN COMPANY,  
Lumberton, Miss.

**VIRGINIA**

**APPLE ORCHARD 15,000 TREES**—Best commercial varieties, 12 years old; fine condition. Many excellent buildings and big equipment machinery and stock. Sacrificed to settle estate for \$40,000; easy terms. WILDER & CO., Charlottesville, Virginia.

**SOUTHERN PROPERTY**

**FOR SALE—FOR LEASE**—The best in Estates, Homes and Homesites on Florida's West Coast. Also inexpensive ones. J. M. CLARK, Box 991, Sarasota, Florida.

**HUNTING PRESERVE**

**IDEAL VIRGINIA HUNTING PRESERVE AND FARM**—1450 Acres.

700 acres woodland, balance farming land, pasture and meadows, watered by large creek and small streams. Attractive modern nine-room residence, three baths, steam heat and water system. Manager's house, several tenant settlements and stock barns.

Abundance of game, such as wild turkeys, quail, rabbits, squirrels and fur-bearing animals; some deer.

Located thirty miles from Lynchburg, seven miles from small town. Photographs, price and full details on request. Non-resident owner, anxious to sell.

GEO. V. VENABLE & CO.,  
Lynchburg, Virginia.



## BUSINESS AND INVESTMENT PROPERTIES

## \$15,000 YEARLY INCOME.

Brand new Brick Court Apartment Building; 20 handsome separate and complete apartments; 100% rented, unsolicited; one of finest and most modern properties State of Virginia; beautiful grounds, with large oaks, facing 160 feet on boulevard adjacent to finest woman's college in the South. Price \$150,000; will consider taking in exchange \$50,000 unencumbered property, revenue nature; purchaser assume \$50,000 first mortgage 10 year loan; balance cash. Get in touch with me at once.

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## BUSINESS OPPORTUNITIES

**LONG TERM LOANS**, large amounts, made on industrial, mercantile, sawmill properties. THOS. W. GILMER, Attorney, Bay Minette, Alabama.

**ILLINOIS LUMBER YARD**, established 60 years, good contracts, no competition, \$15,000; retiring.

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**FOR SALE**—Long established, nationally known manufacturing business. Well located. Exceptional expansion possibilities. Value, including factory building, 300 by 60 feet, \$75,000. This is a real opportunity for someone. General Mgr., Box 229, Fostoria, O.

**WANTED**—Partner with reasonable amount capital to join practical construction man General Construction Business. I have had ten years experience in building highways, streets, bridges, sewers. Plenty of labor; climate conditions excellent for working all winter in Southern States. Opportunities unlimited. Address No. 9045, care of Manufacturers Record, Baltimore.

## FOR SALE

A profitable industry, manufacturing products of nationwide necessity, located in the best section of the South, by a client of mine, whose books I have audited for the past 18 years and which have always shown a substantial profit. Reason for selling, owner is reaching age of retirement, with no son to carry on the business. For full information address

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**FT. LAUDERDALE (FLA.) NEEDS A FURNITURE STORE. IT HAS NONE NOW.**

A growing city of 10,000 population on Florida's East Coast. A real opportunity for a furniture dealer to make money and live in Florida. We own and offer for lease on very favorable terms a four-story reinforced concrete building suitable for a furniture store. We also own and operate the daily newspaper and can cooperate. R. H. Gore Co., 209 S. La Salle St., Chicago, Ill.

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**APARTMENT HOTEL OVERLOOKING COUNTRY CLUB**

Owner will lease or sell new modern apartment hotel. Eight completely furnished five-room apts., total forty rooms, to party with \$9500 cash to purchase furnishings and pay six months rent in advance. Monthly rental \$1000. Also large inn and grounds suitable for business woman for private hotel. Splendid proposition. Address

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THE GAS-O-FLAME STOVE WORKS,  
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**GENERAL ENGINEERING SERVICE**  
Designs, estimates, surveys, appraisals and examinations for real estate development, building construction. Address No. 9049, care Manufacturers Record, Baltimore.

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**ENGINEERING REPORTS** on resources of cities and towns. Recommendations for industrial development and zoning made by specialists in locating industries.

**TECHNICAL SERVICE CO.**  
Woolworth Building New York City

## INDUSTRIES WANTED

**WELL-LOCATED** Southern town wants industry. Will furnish plant, moving expenses, additional capital and other concessions.

**INDUSTRIAL SERVICE CORP.**,  
Asheville, N. C.

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**FOR SALE**  
**SHEET METAL STAMPING PLANT** fully equipped and operating. Sheets and angles available at mills here. Address H. McDERMOTT,  
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**COMPLETE WOODWORKING PLANT**, suitable for furniture or other wood articles. Dry kiln side track, with ample trained labor available. Can be bought for less than one-half reproduction value. First Securities Company, Chattanooga, Tenn.

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Former brewery building alongside of L & N tracts, plenty of trucking space, equipped with two 35 ton ammonia compressors and steam boilers. Three stories. Fire proof construction.

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On Southern Railway, Lumber Yard and Woodworking Plant for the manufacture of interior finish and millwork. Motor driven machinery, side tracks for unloading from cars direct to mill, warehouse and sheds. Going concern with established trade. Present location over 25 years. On main thoroughfare near center of city; 2½ acres. Fine operating proposition and growing investment. Will sign five year lease at attractive rental. Address No. 9046, care of Manufacturers Record, Baltimore, Md.

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**FOR SALE OR RENT**  
Factory building, with clear span of 65x160 plus wings, for office and packing; well lighted, wired for light and power, rest room and city water; main line A. C. L., side track, spur if wanted. On fine system of hard roads, ten miles from water transportation; fine for packing house or cannery.

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## FACTORY SITES

**TWO AND ONE-QUARTER MILES** railroad frontage industrial sites for sale at Baton Rouge. Southern Land and Investment Company, Baton Rouge, La.

## FACTORY SITE ON DEEP WATER

If you are seeking an ideal deep water industrial location in Baltimore, Maryland, on one of the finest harbors in the world, see advertisement on page 87, September 18th issue of the Manufacturers Record.

W. S. CAHILL CO.,  
Key Highway and Webster Street,  
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## FACTORY AND WAREHOUSE SITES

## FOR MANUFACTURING OR WAREHOUSE

Corner Lot 99x340.  
Well located on good street and extending back to tracks of three railroads. A special price to a quick buyer.

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33 years in Charlotte Real Estate.

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**IF YOU HAVE** a following among steam boiler operators and are not afraid to work you can make good money by selling our Boiler Compounds on commission basis. We make water analysis and guarantee results on our Water and Metal Treatments. Write for particulars.

**SOUTHERN PRODUCTS CORPORATION**,  
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**WANTED**—Salesmen on commission basis only, to sell the Guibert Togglegub Drill. Prefer men selling tools and machinery to structural fabricators. Prefer men in cities Los Angeles, San Francisco, Seattle, Portland, Memphis, Kansas City, Dallas and the South. Address GUBERT STEEL COMPANY, P. O. Box 1037, Pittsburgh, Pa.

## MEN WANTED

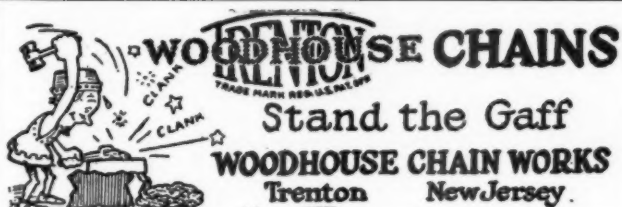
**WANTED**—An experienced man who can organize a new Rayon Cone Winding Department of 200 boys on Foster Machines in a large factory located in the South. Previous wide experience in winding absolutely necessary. State age, married or single, names of previous employers, your experience in detail and salary expected. Address No. 9048, care Manufacturers Record.

**IF YOU ARE OPEN** to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty years. Send only name and address for details.

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**TO SELL**—Westinghouse D. C. Power Plant, 110 volts, with battery, 3 generators of 1500 watts each. In good and smooth operating shape. Being removed because Power Co. energy available. Will sacrifice. Address H. J. PETTIT, Suffolk, Va.

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of used machinery and equipment through the  
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An advertisement in this department will help  
sell machinery being replaced or no longer  
needed in your plant.

*Rates on Request*

**MANUFACTURERS RECORD**  
Baltimore, Md.

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**3500 Foot Frontage on  
James River Channel  
at Hopewell, Virginia**

THIS tract of 135 acres surplus  
land of the Hummel-Ross  
Fibre Corporation is the only  
large channel frontage left in  
Hopewell.

This property is adjacent to two  
railroads, sewer, water, power  
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This property is bounded on two  
sides by operating plants valued  
at over seventy million dollars.

**Hummel-Ross Fibre Corporation**  
Hopewell, Virginia

**RESALE DEPARTMENT**

**MACHINERY**

**EQUIPMENT**

**SUPPLIES**

**5000 KW. TURBO UNIT**

5000 KW. 80% PF., 6250 KVA.-M  
General Electric alternating cur-  
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4150 volts, 1800 R.P.M. direct  
connected to

5000 KW. General Electric-Curtis  
horizontal condensing turbine,  
form P, 175 lb. steam pressure.  
Generator equipped with direct  
connected exciter and switch-  
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Turbine equipped with 9000 sq. ft.  
Alberger surface condenser with  
motor driven circulating pump,  
steam driven dry vacuum pump  
and turbine driven hotwell pump.  
Excellent condition—Must move  
immediately.

*Special Low Price for Quick Sale*  
**The National Power Mach'y Co.**  
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**Low Cost  
Long Life  
UNEXCELLED SERVICE**



Three strong factors that have kept  
Gregory HI-GRADE-REBUILT  
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Before buying consult Gregory's 80-  
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It will save you Money, Time and  
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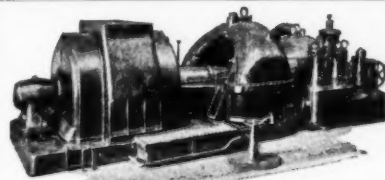
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10,000 KVA Turbo typical of 4 units recently  
delivered and similar to the following.

**PRACTICALLY NEW 100% INTERNAL EX-  
CELLENCE WESTINGHOUSE CONDENSING  
TURBO UNITS COMPLETE—INSTANT SHIP-  
MENT**

1—15,000 KW CW-218 Frame—1800 RPM  
1—10,000 KVA CW-118 Frame—1800 RPM  
1—7,500 KW CW-78 Frame—1800 RPM  
1—5,500 KVA CW-76 Frame—3600 RPM  
1—4,000 KVA CW-76 Frame—3600 RPM  
2—1,700 KVA CW-28 Frame—3600 RPM  
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(3 phase, 60 cycle, standard voltages)

**A.S.M.E. CODE DESIGN BOILERS 200-225 lbs.**

2—1500 H.P. Cross Drum B & W  
2—2650 HP Ladd Bent Tube  
6—627 HP Stirling Plant, modern stokers,  
auxiliaries

8—504 HP B & W Vertical Steel headers, et al.

**CONDENSERS MOTOR GENERATOR SETS**

Verification and proof of new equivalent condi-  
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50% to 100% saving on investment

Send us list of your requirements—or what you  
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**STEEL BUILDING**

80' x 258', 19'11" center to center of columns.  
Weight 230 tons, exceptional condition, low  
price to move quick.

**ZELNICKER IN ST. LOUIS**

Rails, Equipment, Machinery, Oil Engines,  
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Our Transformer Repair Shop is one of the largest in the country. All work guaranteed. Let us estimate on your requirements.



*The* **ELECTRIC SERVICE CO. Inc.**  
America's Used Transformer Clearing House  
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We buy modern type transformers—any size—any quantity.  
Wanted especially—high voltage large capacity transformers in carload shipments.

### GENERATOR

200 KVA, 220 volt, 3 phase, 60 cycle, Burke generator direct connected to Filer-Stowell Uniflow engine.

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2—500 H.P. Heine water tube, 160 lb. pressure, ASME code.  
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1—150 H.P. 72" x 18" Hor. ret. tubular, 150 lb. pressure, ASME code.

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676 cubic foot capacity Ingersoll-Rand Imperial type 10XCB, size 15" and 9 1/4" x 12", 2 stage air compressor, short belt idler drive with 100 H.P. synchronous motor.

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12' Bending roll, belt drive, drop end housing, balance bar, power raise top roll, dia. rolls 13" and 10".  
38"-60" x 32" McCabe double spindle lathe, belt drive, taper attachment and other equipment.  
48" x 16" Lodge & Shipley engine lathe 18 speed geared head, motor drive, quick change, rapid traverse.  
42" x 42" x 12" Cincinnati planer, reversing motor drive, 4 heads, rapid traverse, box table.  
30" x 30" x 8" Dietrick & Harvey open side planer, 1 head on rail, 1 side head, belt drive.  
50" Rochester horizontal boring mill, 3" bar, table 42" x 22", motor drive, rapid traverse.  
24" Gould & Eberhardt shaper, cone drive.  
No. 11 Brown & Sharpe plain grinder, capacity 6" x 32", belt driven.

**THE O'BRIEN MACHINERY CO.**

113 North Third Street

Philadelphia, Pa.

### IF IT'S PIPE OR SECOND HAND

black or galvanized up to 12"—we have it. Cut and threaded to any length. **SPECIAL:** a carload of 3" or 4". Cheap at any time, rethreaded and coupled.

Your inquiry means—Another satisfied customer.

**HUDSON PIPE AND SUPPLY COMPANY**  
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### Let us help you sell your machinery

You may replace certain machinery in your plant this year. Let us help you sell the equipment you will no longer need by advertising it in

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Overhauled and Tested  
New Threads and Couplings  
Established 1904

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### SATISFACTION

**ALBERT PIPE SUPPLY CO., INC.**

NEW-RECLAIMED-USED

**PIPE**

ALL SIZES CUT TO SKETCH  
AND STOCKED

**BERRY & NORTH 13th STS.  
BROOKLYN, N.Y.**

**GUARANTEED**

### BOILERS

9—Kewanee self-contained return tubular  
150 H. P. each.

**M. J. HUNT'S SONS**

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### FIRE TRUCK FOR SALE

One Three (40 gal. tank) Straight Chemical  
1925 Chevrolet Chassis Fire Truck, Complete  
with standard equipment, in excellent condition.

**Address Box 291  
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### Reconditioned Used Pipe

Prompt delivery from stock.  
Estimates cheerfully furnished on  
specification work.

**MARYLAND PIPE & STEEL CORP.**  
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Second Hand  
and New  
Wrought Iron

### PIPE

Overhauled  
Rethreaded  
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*Also Cut to Sketch*

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Flour, Corn, Feed Mill.—For sale,  
cheap: Flour, Corn and Feed Mill in  
best grain section of state.

**J. W. WOOLFOLK**  
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### PIPE

Rethreaded, reconditioned, guaranteed, suitable for all practical purposes, furnished with new threads and couplings, 400,000 feet in all sizes from 24" to 1/4".

Also large stock of spiral pipe, sizes 7", 10", 12", 14", 20" and 24".

Large stock of valves and fittings, screwed and flanged. Can make attractive prices.

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Large quantity new and used Government material in excellent condition, ready for immediate shipment. Low prices.

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500 cu. ft. Ingersoll Rand, Class XRB,  
13" and 8" x 12", Duplex. Two  
Stage. Used less than one year.

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80M daily capacity, complete modern outfit, with boilers, kilns, planing mill, standard fire protection system. Also 20 miles 40 pound rail, 3 locomotives, 2 skidders, one track laying machine, 45 log cars. Can now be seen in operation. All in first class condition.

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### RELAYING RAIL

5 Miles 30-lb.      20 Miles 70-lb.  
10 Miles 40-lb.      5 Miles 75-lb.  
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Also other sections for southern delivery

**WELLER & COMPANY**

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BIRMINGHAM ALABAMA

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40 Standard and 36" Gauge Modern Direct-connected Locomotives, in all types and weights from 3 to 75 tons.  
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15 Steam Shovels and Locomotive Cranes of different types and sizes.  
3000 Tons Relaying Rails, all sizes, on our Birmingham yards.  
100 Sets 35 and 40-lb. Frogs and Switches; good as new.  
Tie plates, track spikes and track bolts, immediate shipment from Birmingham stock.

Your inquiries will receive careful and prompt attention

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FOR SALE or RENT

RENTAL PAYMENTS MAY APPLY ON PURCHASE

1-Lorain 75-A, combination shovel and clamshell. Purchased new September, 1929. In almost new condition. Located in Eastern Pennsylvania.  
1-30-B Bucyrus steam dragline on caterpillars equipped with 35-ft. boom. 1 cu. yd. bucket. Machine in excellent condition, priced for quick sale. Located near Chattanooga, Tenn.  
1-Erie Type B steamer, 1 cu. yd. dipper. This machine is in splendid condition and is reasonably priced. Located in Central Tenn.  
1-Inslay Combination Clamshell and back hoe  $\frac{1}{2}$  c. yd. capacity, gasoline power. In good operating condition. This machine is a real bargain. Located in Southern Tenn.  
1-Type "O"  $\frac{1}{4}$  yard Thew steam shovel center drive truck in splendid condition. Priced right. Can be purchased on liberal terms. Located at Brooklyn, New York.

We have both Steam and Gasoline Excavators ranging from  $\frac{1}{2}$  to  $1\frac{1}{2}$  cu. yd. capacity in various parts of the country that will be sold at extremely low prices or leased with leased payments made applying on purchase price.

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1000 tons relayers complete with angle bars and switches—immediate delivery from Haynesville, La.

All uniformly punched.

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1—Model C American Log Loader A-1 Condition steel cab and boom, complete with transfer rails.  
1—65 H. P. Primm Crude Oil Horizontal Engine, practically new.  
1—150 H. P. Firebox boiler insurable for 150 lbs. working pressure.  
All of above priced at real bargain prices.

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Pipe Machinery Supplies  
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P. & H. Model 206,  $\frac{1}{4}$ -yd. Dragline.  
Byers, 10-ton Caterpillar Crane,  $\frac{1}{4}$ -yd. Clam.  
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16—12-yd. Western Steel Beam Dump Cars.  
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75-ton, 20x26" 6-Driver Switcher, A. S. M. E.  
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35-ton, 13x20" 4-Driver Sad. Tank.  
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WE HAVE OVER FORTY LOCOMOTIVES IN STOCK. REBUILT AND READY ALL TYPES. 10 TO 100 TONS

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### 20 TON

**American Locomotive Crane**

Serial No. 912. Only 3 years use. It is actually 95 % new. 8 wheels—outriggers. 48 ft. boom—A-1 operating condition throughout—Big lot of new extra parts.

Will deliver anywhere in South for less than one-third of new price.

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### RAILS NEW & RELAYING ALL WEIGHTS

Let us know your needs. We may have material in stock near you.

WE BUY RAILS FIT TO RE-LAY  
**ROBINSON & ORR**

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New Frogs and Switches at low prices.

### LOCOMOTIVE CRANE FOR SALE

1—20 ton Industrial Locomotive Crane, 50' Boom, Standard gauge, fine operating condition.

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2—Keystone Graders, Model No. 4.  
1—10 ton Monarch 3 wheel Steam Roller.  
1—6 ton Buffalo Tandem Steam Roller.  
2—16 ton Buffalo Springfield Steam Rollers.  
Large Rock Rock Crushers, Screens and Elevators.

**JOHNSON & HOEHLER**  
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### 50 TONS 100 LB. RELAYING RAILS

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## Shovels — Cranes — Draglines

— For Sale or Lease With Option to Buy —

P&H Model 400 Dragline,  $\frac{1}{4}$  yard, in good shape, ready to go. Located at Chicago plant.

Northwest Model 105 1 yard Crane. Fully reconditioned. At Hoboken plant.

P&H Model 206  $\frac{1}{4}$  yard Shovel. Thoroughly overhauled and in very good operating condition. At Hoboken plant.

Marion No. 32 1 Yard Steam Shovel on full crawlers. Ready for immediate delivery. An exceptional bargain, located at Pittsburgh.

P&H Model 400  $\frac{1}{4}$  yard Clamshell, 35 foot boom. Has been very carefully reconditioned. At Hoboken plant.

Bucyrus 31-B Steam Shovel. In excellent shape. At Hoboken plant.

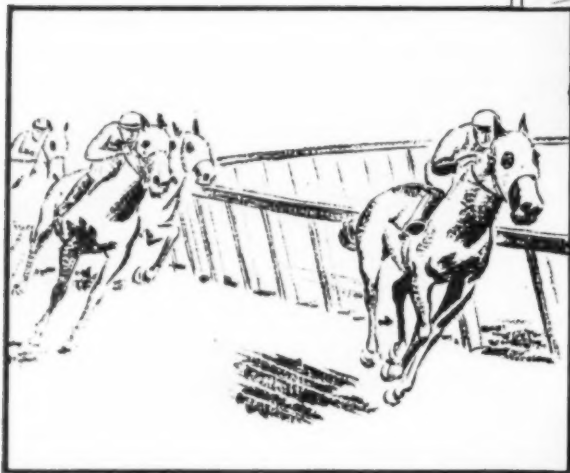
Liberal Terms—Large Stock To Pick From—Write Or Wire At Our Expense

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TRADE MARK HAYCO  
ELECTRIC MOTOR  
ORANGE PEEL  
CLAM SHELL  
DRAG LINE

**W**INNERS on the track have stamina to set a steady pace and stay ahead at every turn. Hayward Buckets exhibit the same thoroughbred characteristics to lead the field in economical handling.

Hayward Class "E" Clam Shell Buckets are widely endorsed for the transferring of bulky loads from cars, barges and trucks to storage or to point of use. The bowl fills quickly. Closing lines are simple in operation. They cannot become entangled. Cutting edges are reinforced to meet the wear of sharp, rough handling.

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*Having four different types of digging and rehandling buckets to draw from, makes a Hayward recommendation absolutely unbiased.*

### THE HAYWARD COMPANY

50-52 Church Street

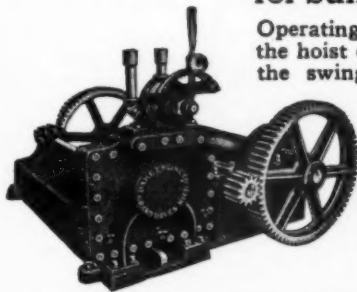
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# Hayward Buckets

## DAKE SWINGING ENGINES

for bull wheel derricks



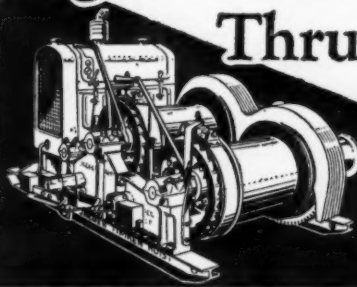
Operating independently of the hoist engine, they cut down the swinging time and speed up derrick work.

The engine has no dead centers and starts instantly from any position permitting quick accurate spotting of the load.

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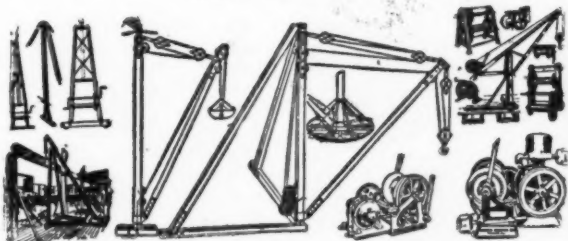


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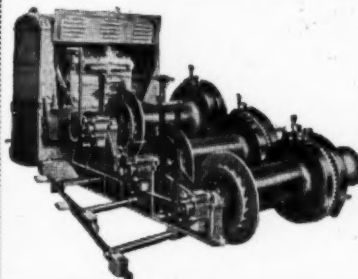


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Gasoline—Electric—Steam

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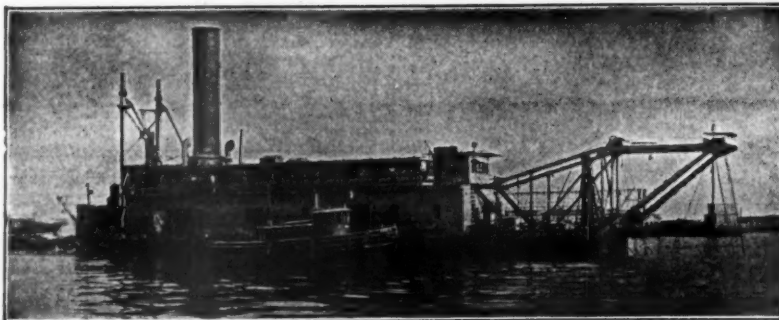
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"Boss, these shovels don't stand up like those CUMBERLANDS. They don't hold their edge and they haven't got the balance. Shoveling is a lot easier with those CUMBERLANDS; somehow they don't make you so tired."

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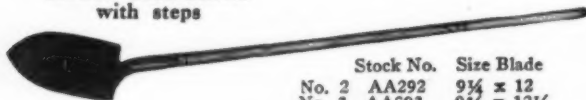
## American "CUMBERLAND" TEMPERED ALLOY Shovels

D Handle, Square Point,  
Plain Back Shovel  
with steps



	Stock No.	Size Blade
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No. 3	AA103	10 x 12 1/2
No. 4	AA104	10 1/2 x 13

Long Handle Round Point  
Hollow Back Shovel  
with steps



	Stock No.	Size Blade
No. 2	AA292	9 1/4 x 12
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D Handle Hollow Back Dia-  
mond Point Scoop with  
steps



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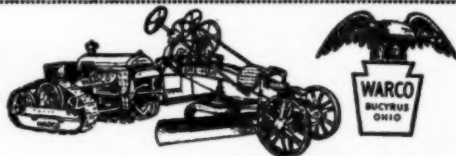
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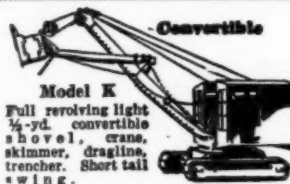
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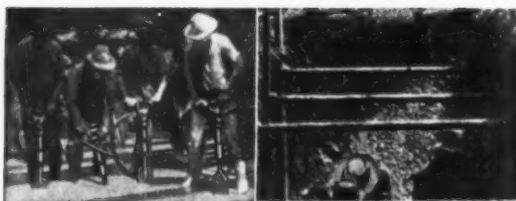
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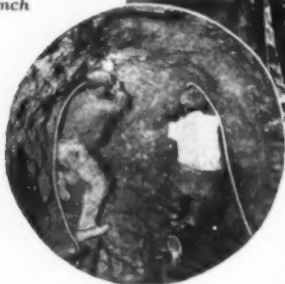






Above—4600 yards of blue clay, hardpan, and limestone are excavated by Spaders for bridge footings. Spaders broke the limestone, radially, from holes made with a Sullivan drill.

At right—Hand labor with Spaders takes the place of heavy ditching machinery on trench for 40-inch water main.



At left—Bull point Spaders drive sewer tunnel rapidly in dry clay.

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Spaders can be had with 4, 5, or 6 inch spades, or with bull points, asphalt cutters, or chisels.



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air power equipment

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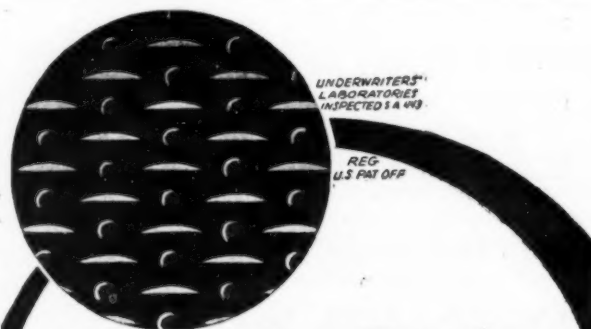
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FUEL is Aviation Grade  
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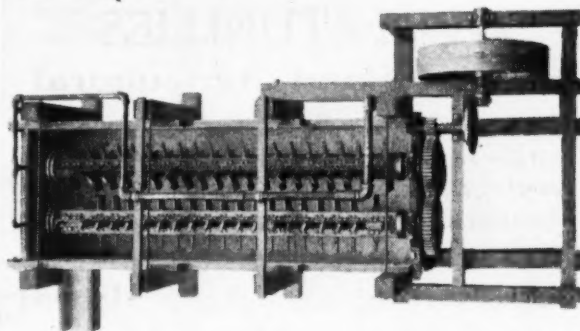
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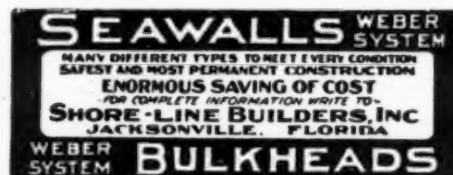
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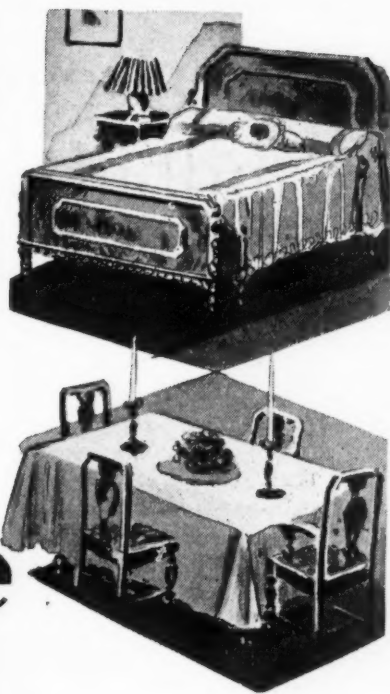
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Baltimore, Maryland

# Perhaps You Sleep in a Virginia Bed OR Dine at a Carolina Table



**T**WO years ago the Norfolk and Western Railway stood fifth among the railways of the United States in the tonnage of furniture originating on its lines. It now has second place. Along its line at Roanoke, Va., Galax, Bassett, Martinsville, Marion, Pulaski, Lynchburg, Waynesboro, Rocky Mount, Bristol, Va. - Tenn., Winston - Salem, N. C., Walkertown, Hagerstown, Md., Cincinnati, Ohio, Columbus, Portsmouth, Williamsburg and other points, are furniture factories whose total production runs into bewildering figures.

During 1929, manufacturers on the Norfolk and Western made and loaded 9,389 straight carloads and 6,893 break-bulk carloads of furniture. From connecting lines 5,296 carloads were received, making a total of 22,028 carloads handled.

One of the reasons for this rapid development of the furniture manufacturing industry in the territory served by the Norfolk and Western is the unexcelled transportation service to the great centers of population. Deliveries are made at Chicago, New York, St. Louis, Detroit, Cleveland, Louisville and Cincinnati within three or four days, enabling dealers to greatly reduce their invoices.

The furniture-carrying equipment of the railway is ample, modern and faultlessly maintained. During the last three years it has built 1,500 all-steel cars designed after careful investigation of the needs of furniture manufacturers. Intensive study has also resulted in better packing and a factory loading system planned to eliminate unnecessary re-handling and transferring enroute. Deliveries have been speeded up, claims for damages have been greatly reduced; in general, the railway has provided a freight service that has contributed much toward the success of furniture manufacturers.

*Representatives of the  
Freight Traffic Department  
will gladly furnish  
specific and detailed in-  
formation on request.*

## Norfolk<sup>a</sup>nd Western Railway

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Hollowell, Gorham & Co., Greensboro, N.C.  
Le Baron, E. T., Jacksonville, Fla.

## AERIAL MAPS and SURVEYS.

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De Laval Steam Turbine Co., Trenton, N.J.  
Equipment Corp. of America, Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Ingersoll Rand Co., New York, N. Y.  
Noro Engine Co., Lansing, Mich.  
O. K. Clutch & Machy. Co., Columbia, Pa.  
Quincy Compressor Co., Quincy, Ill.  
Sullivan Machinery Co., Chicago, Ill.  
Westinghouse Traction Brake Co., Wheeling, Pa.

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Skinner Bros. Mfg. Co., St. Louis, Mo.

## AIR HEATERS.

Babcock & Wilcox Co., New York.

## AIRPORTS.

Shaw Co., Russell B., St. Louis, Mo.

## ALUMINUM BRONZE POWDER.

Aluminum Co. of America, Pittsburgh.

## AMMONIA Valves and Fittings.

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Main, Inc., Chas. T., Boston, Mass.

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Boney, Leslie N., Wilmington, N. C.  
Chase, Wm., J. J., Atlanta.  
Main, Inc., Chas. T., Boston, Mass.  
Milburn, Heister & Co., Wash., D. C.  
Moyer Co., Tilghman, Allentown, Pa.  
Simmons, Inc. & Associates, B. Stanley, Washington, D. C.  
Preacher & Co., Inc., G. Lloyd, Atlanta.  
Sirrline & Co., J. E., Greenville, S. C.  
Wheeler, Walter H., Minneapolis, Minn.  
Widmer Engineering Co., St. Louis, Mo.  
—(Golf Course, Landscaping.)  
Draper, E. S., Charlotte, N. C.  
Spoon & Lewis, Greensboro, N. C.

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## ARCHITECTURAL IRON WORK.

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Virginia Bridge & Iron Co., Roanoke, Va.

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## —Sluicing Systems.

Allen-Sherman-Hoff Co., Philadelphia, Pa.

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Allen-Sherman-Hoff Co., Philadelphia, Pa.

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Gulf Refining Co., Pittsburgh, Pa.

## —(Emulsified.)

Headley Emulsified Products Co., Philadelphia, Pa.

## —Filler.

American Limestone Co., Knoxville, Tenn.

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Le Baron, E. T., Jacksonville, Fla.

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Baltimore Trust Co., Baltimore, Md.  
Bank of Alabama, The, Ensley, Ala.  
Bank of New York & Trust Co., N. Y.  
First and Merchants National Bank, Richmond, Va.  
Maryland Trust Co., Baltimore, Md.  
Mercantile Trust Co., Baltimore, Md.

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Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Sweet's Steel Corp., Williamsport, Pa.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Timken Roller Bearing Co., Canton, O.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

## BATTERIES (Storage.)

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## BEAMS, CHANNELS, ANGLES.

Belmont Iron Works, Philadelphia, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.

## BEARINGS (Anti-friction.)

Hyatt Roller Bearing Co., Newark, N. J.  
Timken Roller Bearing Co., Canton, Ohio.

## —(Line Shaft.)

Wood's Sons Co., T. B., Chambersburg, Pa.

## —(Roller.)

Hyatt Roller Bearing Co., Newark, N. J.  
Timken Roller Bearing Co., Canton, Ohio.

## BELT (Chain.)

Diamond Chain & Mfg. Co., Indianapolis.

## —(Leather, Canvas, Rubber.)

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Republic Rubber Co., Youngstown, Ohio.

## —Dressing.

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## —Conveyors.

Harber-Greene Co., Aurora, Ill.

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Angle Steel Stool Co., Plainwell, Mich.

## —Drawers (Steel.)

Angle Steel Stool Co., Plainwell, Mich.

## BENCHES and TABLES.

Angle Steel Stool Co., Plainwell, Mich.

## BILLETS (Basic Open Hearth.)

Gulf States Steel Co., Birmingham, Ala.  
Republic Steel Corp., Youngstown, Ohio.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

## BINS (Drill and Reamer.)

Angle Steel Stool Co., Plainwell, Mich.

## —(Steel Loading.)

Blaw-Knox Co., Pittsburgh, Pa.  
Erie Steel Construction Co., Erie, Pa.

## BLASTING POWDER and Accessories.

Du Pont de Nemours & Co., E. I., Wilmington, Del.  
Hercules Powder Co., Inc., Wilmington, Del.

## BLINDS (Venetian and Awning.)

Wilson Corp., The, J. G., New York.

## BLOCKS (Chain.)

Harrington Co., The, Philadelphia, Pa.

## —TACKLE for Wire and Manila Rope.

Patterson Co., W. W., Pittsburgh.

## BLOW PIPE SYSTEMS.

Skinner Bros. Mfg. Co., St. Louis, Mo.

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Charleston Dry Dock & Machine Co., Charleston, S. C.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Cole Mfg. Co., R. D., Newnan, Ga.  
Combustion Engr. Corp., New York, N. Y.  
Hedges Walsh Weldner Co., Chattanooga, Tenn.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Oil City Boiler Works, Oil City, Pa.  
Schofield's Sons Co., J. S., Macon, Ga.  
Titusville Iron Works Co., Titusville, Pa.  
Vogt Mch. Co., Henry, Louisville, Ky.

## —(Oil)

Babcock & Wilcox Co., New York.

## —(Stoker Unit.)

Oil City Boiler Works, Oil City, Pa.

## —(Used.)

Delta Equipment Co., Philadelphia, Pa.  
O'Brien Machinery Co., Philadelphia, Pa.  
Randle Machinery Co., The, Cincinnati, O.  
Zelnicker Supply Co., W. A., St. Louis.

## BOILER SETTINGS.

Babcock & Wilcox Co., New York.  
Harbison-Walker Refractories Co., Pittsburg.

## —Tubes.

Babcock & Wilcox Co., New York.  
Boiler Tube Co. of America, Pittsburgh.  
National Tube Co., Pittsburgh, Pa.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.

## —Tubes (Charcoal, Iron.)

Reading Iron Co., Reading, Pa.

## BOLTS, Rivets, Studs, Washers.

Bethlehem Steel Co., Bethlehem, Pa.  
Progressive Mfg. Co., Torrington, Conn.  
Republic Steel Corp., Youngstown, Ohio.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Virginia Bridge & Iron Co., Roanoke, Va.

## —(Track.)

Sweet's Steel Co., Williamsport, Pa.

## BOND BUYERS.

Girraway & Co., S. G., Chicago.  
Hanchett Bond Co., Inc., The, Chicago.  
Law & Co., A. M., Springfield, N. C.  
Mercantile Trust Co., Baltimore, Md.  
Nuven & Co., John, Chicago, Ill.  
Provident Savings Bank and Trust Co., Cincinnati, Ohio.  
Taylor, Wilson & Co., Inc., Cincinnati, O.

## BORING (Core.)

Mott Core Drilling Co., Huntington, W. Va.  
Pennsylvania Drilling Co., Pittsburgh, Pa.  
Southern Drilling Co., Saltville, Va.  
Sprague & Henwood, Inc., Scranton, Pa.

## BOXES (Paper.)

Old Dominion Box Co., Lynchburg, Va.

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Copper and Brass Research Assn., New York.  
Mueller Co., Decatur, Ill.

## BRICK (Common Building.)

Friend & Co., Inc., Petersburg, Va.

## —(Face.)

Alabama Clay Prod. Co., Birmingham.

## —(Fire.)

Alabama Clay Prod. Co., Birmingham.  
Dee Co., Wm. E., Oak Hill, Ohio.  
North Amer. Refractories Co., Cleveland, O.  
Taylor Sons Co., Charles, Cincinnati.

## —(Vitrified, Paving.)

National Paving Brick Mfrs. Assn., Washington, D. C.

## —and Clayworking Machy.

Steel & Sons, J. C., Statesville, N. C.

## BRIDGE (Operating Machinery.)

Earle Gear & Machine Co., Phila., Pa.

## —Timber.

American Crowsoting Co., Louisville, Ky.  
Industrial Lumber Co., Elizabeth, La.  
Kirby Lumber Co., Houston, Texas.

## BRIDGES (Concrete.)

Atlantic Bridge Co., Greensboro, N. C.

## —(Crested Wood.)

Atlantic Bridge Co., Greensboro, N. C.

## —(Steel.)

American Bridge Co., New York, N. Y.  
Atlantic Bridge Co., Greensboro, N. C.  
Belmont Iron Works, Philadelphia, Pa.  
Bristol Steel & Iron Works, Inc., Bristol, Va.  
Champion Bridge Co., Wilmington, O.  
Converse Bridge & Steel Co., Chattanooga, Tenn.

Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Co., Pittsburgh, Pa.  
Nashville Bridge Co., Nashville, Tenn.  
Richmond Struc. Steel Co., Richmond, Va.  
Virginia Bridge & Iron Co., Roanoke, Va.

## BRONZE (Architectural)

Heath Company, J. S., Waukegan, Ill.

## BUBBLERS.

Rundle-Spence Mfg. Co., Milwaukee, Wis.

## BUCKETS (Clam Shell.)

Blaw-Knox Co., Pittsburgh, Pa.  
Erie Steel Construction Co., Erie, Pa.  
Hayward Co., The, New York, N. Y.  
Industrial Brownhoist Corp., Cleveland, O.  
Kiesler Co., Jos. F., Chicago, Ill.  
Owen Bucket Co., The, Cleveland, Ohio.

## —(Dredging, Excavating, Sewer, etc.)

Erie Steel Construction Co., Erie, Pa.  
Hayward Co., The, New York, N. Y.  
Monaghan Mfg. Corp., Chicago, Ill.  
Kiesler Co., Jos. F., Chicago, Ill.  
Owen Bucket Co., The, Cleveland, Ohio.  
Stuebner Iron Works, G. L., Long Island City, N. Y.

## —(Elevator.)

Hendrick Mfg. Co., Carbondale, Pa.  
Webster & Weller Mfg. Cos., Chicago.

## —(Orange Peel.)

Hayward Co., The, New York, N. Y.

## —(Ore Handling.)

Hayward Co., The, New York, N. Y.  
Owen Bucket Co., The, Cleveland, Ohio.  
Stuebner Iron Works, G. L., Long Island City, N. Y.

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Cowper Co., Inc., The John W., Richmond, Va.  
Moyer Co., Tilghman, Allentown, Pa.  
Stone & Webster, Inc., Boston, Mass.  
Thompson & Bros., T. C., Charlotte, N. C.  
White Engineering Corp., J. G., New York.

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Belmont Iron Works, Philadelphia, Pa.  
Blaw-Knox Co., Pittsburgh, Pa.  
Braden Steel Corp., Tulsa, Okla.  
Butler Mfg. Co., Kansas City, Mo.  
Edwards Mfg. Co., Cincinnati, O.  
McClintic-Marshall Co., Pittsburgh, Pa.  
Nashville Bridge Co., Nashville, Tenn.  
Truscon Steel Co., Youngstown, O.  
Virginia Bridge & Iron Co., Roanoke, Va.

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Butler Mfg. Co., Kansas City, Mo.

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Shore-Line Builders, Inc., Jacksonville, Fla.  
Snare Corp., Frederick, New York, N. Y.

## BULLDOZERS.

Trackcon Co., Milwaukee, Wis.

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## CABLES (Stud Link.)

Woodhouse Chain Works, Trenton, N. J.

## —and Wire (Electric.)

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Okonite Co., New York, N. Y.  
Roebling's Sons Co., John A., Trenton, N.J.  
Western Electric Co., New York City.

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Northwest Engineering Co., Chicago.

Webster & Weller Mfg. Co., Chicago.

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Cement Gun Construction Co., Chicago.

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### —Information Only.

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Jaeger Machine Co., Columbus, Ohio.

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 Cowper Co., Inc., John W., Richmond, Va.  
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 Smallman Construction Co., Birmingham, Ala.  
 Snare Corp., Frederick, New York, N. Y.  
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 Cohen, Chas. F., Lima, O.  
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 Thew Shovel Co., The, Lorain, Ohio.

—(Crawler.)

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 Ohio Power Shovel Co., Lima, Ohio.  
 Thew Shovel Co., The, Lorain, Ohio.

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 Ohio Power Shovel Co., Lima, Ohio.  
 Thew Shovel Co., The, Lorain, Ohio.

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 Northwest Engineering Co., Chicago, Ill.  
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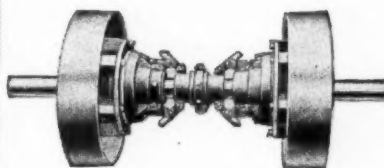
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 American Sheet & Tin Plate Co., Pittsburgh, Pa.  
 Armco Culvert Mfrs. Assn., Middletown, O.  
 Dixie Culvert & Metal Co., Atlanta, Ga.  
 Dixie Culvert Mfg. Co., Little Rock, Ark.  
 Louisiana Corr. Culvert Co., Baton Rouge, La.  
 Tenn. Metal Culvert Co., Nashville, Tenn.  
 Western Metal Mfg. Co., Houston, Texas.

**CURB PROTECTORS (Steel Bar.)**  
 Truscon Steel Co., Youngstown, Ohio.

**CUTTERS (Welding.)**  
 Leach & Sons, Inc., New York, N. Y.

**CYLINDERS (Concrete or Air Gas.)**  
 Janney, Jr., Inc., Philadelphia, Pa.  
 National Tube Co., Pittsburgh, Pa.

**DAMP-PROOFING.**  
 Healey Enamelled Products Co., Philadelphia, Pa.

**DERRICKS and Derrick Fittings.**  
 Linderwood Mfg. Co., Elizabeth, N. J.  
 Sagen Derrick Co., Chicago, Ill.

**(Used.)**  
 Gaier Equipment Corp., New York, N. Y.

**DESKS (School.)**  
 Andrews Co., A. H., Chicago, Ill.  
**(Steel Factory.)**  
 Angle Steel Stool Co., Plainwell, Mich.

**DIFFUSERS.**  
 Swenson Evaporator Co., Harvey, Ill.

**DIGESTERS (Welded.)**  
 Swenson Evaporator Co., Harvey, Ill.

**DITCHING MACHINERY.**  
 Barber Greene Co., Aurora, Ill.  
 Bay City Shovel, Inc., Bay City, Mich.  
 Harnischfeger Corp., Milwaukee, Wis.  
 Hayward Co., Inc., New York, N. Y.  
 Industrial Brownhoist Corp., Cleveland, O.  
 Northwest Engineering Co., Chicago, Ill.  
 Ohio Power Shovel Co., Lima, Ohio.  
 Owen Bucket Co., Inc., Cleveland, O.

**DOORS (Bronze.)**  
 Michaels Art Bronze Co., Covington, Ky.  
**(Fire.)**  
 Merchant & Evans Co., Philadelphia, Pa.  
 Richards-Wilcox Mfg. Co., Aurora, Ill.

**(Fireproof, Air Chamber.)**  
 Wilson Corp., The J. G., New York.

**(Kalemein.)**  
 Moeschl-Edwards Corr. Co., Cincinnati.

**(Rolling, Steel and Wood.)**  
 Kinneer Mfg. Co., The, Columbus, Ohio.  
 Midon Co., R. C., Detroit, Mich.  
 Moeschl-Edwards Corr. Co., Cincinnati.  
 Wilson Corp., The J. G., New York.

**(Steel.)**  
 Truscon Steel Co., Youngstown, Ohio.

**(Tubular Steel.)**  
 Bayley Co., Wm., Springfield, O.

**DRAFTSMEN'S SUPPLIES.**  
 Weber Co., Inc., F., Philadelphia, Pa.

**DRAGLINE EXCAVATORS.**  
 Bucyrus-Erie Co., Erie, Penna.  
 Harnischfeger Corp., Milwaukee, Wis.  
 Monaghan Mfg. Corp., Chicago, Ill.  
 National Equipment Corp. (Koehring, Inc.), Milwaukee, Wis.  
 Northwest Engineering Co., Chicago, Ill.  
 Ohio Power Shovel Co., Lima, Ohio.  
 Sauerman Bros., Chicago, Ill.  
 Thew Shovel Co., The, Lorain, Ohio.  
 Universal Power Shovel Co., Milwaukee, Wis.

**DREDGES (Dipper, Elevator, Hydraulic.)**  
 Bay City Shovel, Inc., Bay City, Mich.  
 Bucyrus-Erie Co., Erie, Pa.  
 Elliott Machine Corp., Baltimore, Md.  
 Morris Machine Wks., Baldwinsville, N. Y.

**DREDGING (River and Harbor Improvement.)**  
 Arundel Corp., The, Baltimore, Md.  
 Atlantic Gulf and Pacific Co., New York.  
**(Machinery.)**  
 American Steel Dredge Co., Fort Wayne, Ind.  
 Elliott Machine Corp., Baltimore, Md.  
 Hayward Co., The, New York.

**DRILLING CONTRACTORS.**  
 Mott Core Drilling Co., Huntington, W. Va.  
 Pennsylvania Drilling Co., Pittsburgh, Pa.  
 Southern Drilling Co., Baltimore, Va.  
 Sprague & Hanwood, Inc., Scranton, Pa.

**DRILLS (Artesian Well.)**  
 Virginia Machinery & Well Co., Inc., Richmond, Va.

**(Electric.)**  
 Chicago Pneumatic Tool Co., New York.  
 Sullivan Mfg. Co., Chicago.

**(Pneumatic.)**  
 Chicago Pneumatic Tool Co., New York.  
 Ingersoll-Rand Co., New York, N. Y.  
 Sullivan Machinery Co., Chicago, Ill.

**DRINKING FOUNTAINS.**  
 Iturbe-Spence Mfg. Co., Milwaukee, Wis.

**DROP-FORGING MACHINERY.**  
 Bliss Co., A. W., Brooklyn, N. Y.

**DRYERS (Gravel and Sand.)**  
 Ripley Fdy. & Mch. Co., Ripley, Ohio.

**DRY KILNS and Equipment.**  
 Moore Dry Kiln Co., Jacksonville, Fla.

**DRYING MACHINERY.**  
 American Process Co., New York, N. Y.

**DUMP TRUCK BODIES and HOISTS.**  
 Easton Car & Construction Co., Easton, Pa.

**DUSTPROOFING (Concrete.)**  
 Sonneborn Sons, Inc., L., New York.

**DYESTUFFS.**  
 Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

**DYNAMITE (Industrial and Agricultural.)**  
 Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.  
 Hercules Powder Co., Inc., Wilmington, Del.

**ECONOMIZERS (Fuel.)**  
 Babcock & Wilcox Co., New York.

**ELECTRICAL Instruments and Supplies.**  
 Adam Electric Co., Frank, St. Louis.  
 General Electric Co., Schenectady, N. Y.  
 Western Electric Co., New York City.

**(Machinery (Generators, Motors, etc., New.)**  
 Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
 Fairbanks, Morse & Co., Chicago, Ill.  
 General Electric Co., Schenectady, N. Y.  
 Howell Electric Motors Co., Howell, Mich.  
 Rockford Power Machy. Co., Rockford, Ill.  
 Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

**(Machinery (Generators, Motors, etc., Used.)**  
 Delta Equipment Co., Philadelphia, Pa.  
 Electric Service Co., Cincinnati, Ohio.  
 Electrical Equip. Co., Raleigh, N. C.  
 General Electric Co., Schenectady, N. Y.  
 Gregory Electric Co., Chicago.  
 Nashville Industrial Corp., Old Hickory, Tenn.

**(Rolling, Steel and Wood.)**  
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 Midon Co., R. C., Detroit, Mich.  
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 Ripley Fdy. & Mch. Co., Ripley, Ohio.

**DRY KILNS and Equipment.**  
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 American Process Co., New York, N. Y.

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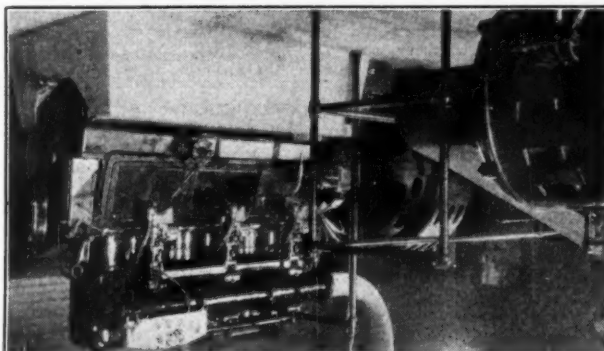
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Pressure and Gravity type for Municipal Water Supplies, Rayon Manufacturing Plants, Textile Finishing Establishments, Raw Water Ice Plants, Laundries, Etc.

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Manufacturers of Rolling Steel Doors and Shutters; Hollow Metal  
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Dixie Electro Plating Co., Houston, Tex.

**(Mining. See Engineers, Geological.)****(Municipal.)**

Billingsley, James W., New Orleans, La.  
 Consoer, Older & Quinlan, Inc., Chicago, Ill.  
 Dow & Smith, New York, N. Y.  
 Hurrub Engr. Co., C. N., Nashville, Tenn.  
 Hills Co., George B., Jacksonville, Fla.  
 Howerton Engineering Co., Asheville, N.C.  
 Huey, S. E., Monroe, La.  
 Knowles, Inc., Morris, Pittsburgh, Pa.  
 McCrary Co., The, J. B., Atlanta, Ga.  
 Spoon & Lewis, Greensboro, N. C.  
 White Co., Gilbert C., Durham, N. C.

**(Paving and Roads.)**

Billingsley, James W., New Orleans, La.  
 Dow & Smith, New York, N. Y.  
 Freeland, Roberts & Co., Nashville, Tenn.  
 Hurrub Engr. Co., C. N., Nashville, Tenn.  
 Howerton Engineering Co., Asheville, N.C.  
 Spoon & Lewis, Greensboro, N. C.  
 White Co., Gilbert C., Durham, N. C.

**(Production.)**

Scotfield Engr. Co., Phila., Pa.

**(Public Service Properties.)**

Bylesby Engineering & Management Corp., Chicago, Ill.  
 Ford, Bacon & Davis, Inc., New York, N. Y.  
 Fuller & M. Clintock, New York, N. Y.  
 Knowles, Inc., Morris, Pittsburgh, Pa.  
 Main, Inc., Chas. T., Boston, Mass.  
 Sanderson & Porter, New York, N. Y.  
 Scotfield Engineering Co., Phila., Pa.  
 Stone & Webster, Inc., Boston, Mass.  
 White Engineering Corp., J. G., New York, N. Y.

**(Railroad.)**

Huey, S. E., Monroe, La.  
 Mees & Mees, Charlotte, N. C.

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Atlantic Bridge Co., Greensboro, N. C.  
 Ballinger Co., Philadelphia, Pa.  
 Battey & Kipp, Inc., Chicago, Ill.  
 Fay, Spofford & Thorndike, Boston, Mass.  
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 Gardner & Howe, Memphis, Tenn.  
 Greiner & Co., J. E., Baltimore, Md.  
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 Main, Inc., Chas. T., Boston, Mass.  
 Steel & Leiby, Knoxville, Tenn.  
 Tuker & Laxton, Charlotte, N. C.  
 Turner, C. A. P., Minneapolis, Minn.  
 Wheeler, Walter H., Minneapolis, Minn.

**(Research and Development.)**

Invicta Engineering Co., Birmingham, Ala.

**(Sanitary.)**

H. Iza Engineering Co., Chicago.

Whitman, Requaardt &amp; Smith, Balto., Md.

**(Sewage Disposal Plants.)**

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 Wiedeman & Singleton, Inc., Atlanta, Ga.

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 Howerton Engineering Co., Asheville, N.C.  
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 Mees & Mees, Charlotte, N. C.  
 Sanderson & Porter, New York, N. Y.  
 Spoon & Lewis, Greensboro, N. C.  
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 White Engineering Corp., J. G., New York, N. Y.  
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 Williamson, Lee H., Charlottesville, Va.

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 Smallman Construction Co., Birmingham, Ala.  
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 Stewart Iron Works Co., Cincinnati, O.  
 Woven.  
 American Steel and Wire Co., Balto., Md.  
 Anchor Post Fence Co., Baltimore, Md.  
 Cyclone Fence Co., Waukegan, Ill.  
 Gulf States Steel Co., Birmingham, Ala.  
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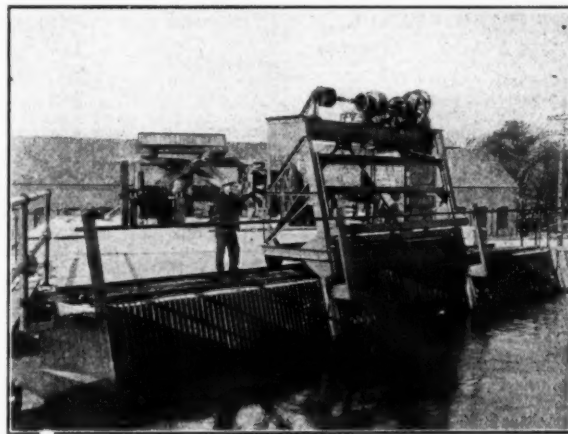
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**LUMBER (Ceiling, Flooring, Siding.)**

Industrial Lumber Co., Elizabeth, La.

Kirby Lumber Co., Houston, Texas.

**—(Creosoted.)**

Amer. Creosote Wks., Inc., New Orleans.

Amer. Creosoting Co., Inc., Louisville, Ky.

Ayer & Lord Tie Co., Inc., Chicago.

Carolina Wood Preserving Co., Charleston, S. C.

Delaware Wood Preserving Co., Phila.

Eppinger & Russell Co., New York, N. Y.

Gulf States Creos. Co., Hattiesburg, Miss.

Savannah Creos. Co., Savannah, Ga.

**—(Heavy Construction, Pitch, Pine, etc.)**

Industrial Lumber Co., Elizabeth, La.

Kirby Lumber Co., Houston, Texas.

**—(Zinc Meta Arsenite Treated.)**

Curtin-Howe Corp., New York City.

**MACHINERY (Special.)**

Bliss Co., E. W., Brooklyn, N. Y.

Earle Gear & Machine Co., Phila., Pa.

Fernholtz Machinery Co., St. Louis, Mo.

General Machine Works, York, Pa.

**—and Supplies (New and Used.)**

Electric Service Co., Cincinnati, Ohio.

Equip. Sales & Rentals Co., Pittsburgh.

Heinen Engineering Corp., New York.

Marine Metal & Supply Co., New York.

Nashville Ind. Corp., Old Hickory, Tenn.

O'Brien Machinery Co., The, Phila., Pa.

Randle Machinery Co., The, Cincinnati, O.

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Serfert's Sons, Inc., L. F., Phila., Pa.

Zelnicker Supply Co., W. A., St. Louis.

**MACHINE TENDERS (Steel.)**

Angle Steel Stool Co., Plainwell, Mich.

**—(Tools.)**

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Sebastian Lathe Co., Cincinnati, Ohio.

**—(Used.)**

Delta Equipment Co., Philadelphia, Pa.

O'Brien Machinery Co., Philadelphia, Pa.

**MAIL CHUTES.**

Cutler Mail Chute Co., Rochester, N. Y.

**MARBLE (Producers and Manufacturers.)**

Georgia Marble Co., The, Tate, Ga.

**MATERIAL ELEVATORS.**

National Equipment Corp. (Insley, C. H., & E.), Milwaukee, Wis.

**METAL-Cutting Machinery.**

Earl Gear & Machine Co., Phila., Pa.

**—Working Machinery.**

Bliss Co., E. W., Brooklyn, N. Y.

**MILL MACHINERY and SUPPLIES.**

Lombard Iron Works & Supply Co., Augusta, Ga.

**MINING MACHINERY.**

McLanahan-Stone Machine Co., Hollidaysburg, Pa.

**MIXERS.**

National Equipment Corp. (Koehring, T. L. Smith, Kwik-Mix), Milwaukee, Wis.

**—(Asphalt.)**

Erie Machine Shops, Erie, Pa.

**—(Hot.)**

Koehring Co., Milwaukee, Wis.

**—(Mortar.)**

Chain Belt Co., Milwaukee, Wis.

Jaeger Machine Co., Columbus, Ohio.

**—(Plaster.)**

Blystone Mfg. Co., Cambridge Springs, Pa.

Chain Belt Co., Milwaukee, Wis.

Dunning & Bouchert Press Co., Syracuse, N. Y.

Jaeger Machine Co., Columbus, Ohio.

**MORTAR INGREDIENT.**

Louisville Cement Co., Louisville, Ky.

**MOTORS (Electric.)**

Fairbanks, Morse & Co., Chicago, Ill.

General Electric Co., Schenectady, N. Y.

Howell Electric Motors Co., Howell, Mich.

Western Electric Co., New York City.

Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

**MOTOR TRUCKS.**

International Harvester Co. of America, Inc., Chicago, Ill.

**NAILS (Cut.)**

Reading Iron Co., Reading, Pa.

**—and Spikes.**

American Steel & Wire Co., Balto., Md.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Youngstown Sheet & Tube Co., Youngstown, Ohio.

**NATURAL GAS COMPANIES.**

(Offering Industrial and Commercial Opportunities.)

Arkansas Natural Gas Corp., Shreveport, La.

**OIL (Fuel and Gas.)**

Gulf Refining Co., Pittsburgh, Pa.

**—Cups.**

Lunkenheimer Co., The, Cincinnati, O.

**ORE-WASHING MACHINERY.**

Georgia Iron Works, Augusta, Ga.

McLanahan-Stone Machine Co., Hollidaysburg, Pa.

**ORNAMENTAL BRONZE WORK.**

Heath Co., J. S., Waukegan, Ill.

Michaels Art Bronze Co., Covington, Ky.

**—Iron Work.**

Roanoke Iron & Bridge Wks., Roanoke, Va.

Snead Architectural Iron Works, Louisville, Ky.

Southern Engineering Co., Charlotte, N. C.

Stewart Iron Works Co., Cincinnati, O.

**PACKAGE SERVICE (Corrugated Paper.)**

Hinde & Dauch Paper Co., Sandusky, O.

**PACKING (Asbestos, Metallic, Rubber, Leather, etc.)**

Jenkins Bros., New York, N. Y.

Republic Rubber Co., Youngstown, Ohio.

**PAINT (Aluminum.)**

**PATENT ATTORNEYS.**

Buck, Sterling P., Washington, D. C.  
Coleman, Watson E., Washington, D. C.  
Eaton, Paul R., Charlotte, N. C.  
Sasnett, Edward C., Washington, D. C.  
Seymour & Bright, Washington, D. C.

**PATTERNS (Drawing, etc.)**

Haas Pattern Co., A. W., Atlanta, Ga.

**PAVING BLOCKS (Creosoted Wood.)**

American Creosote Works, New Orleans.

**—(Brick.)**

National Paving Brick Mfrs. Assn., Washington, D. C.

**—Mixers.**

National Equipment Corp. (Kochring, T. L. Smith), Milwaukee, Wis.

**—Plant (Asphalt.)**

Simplicity System Co., Chattanooga, Tenn.

**PENSTOCKS.**

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago, Bridge & Iron Works, Atlanta.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Smith Co., S. Morgan, York, Pa.

**PERFORATED METAL.**

Chicago Perforating Co., Chicago, Ill.  
Erdle Perforating Co., Rochester, N. Y.  
Harrington & King Perf. Co., Chicago.  
Hendrick Mfg. Co., Carbondale, Pa.  
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.  
Mundt & Sons, Charles, Jersey City, N. J.

**PETROLEUM REFINERS.**

Gulf Refining Co., Pittsburgh, Pa.

**PHOSPHATE ACID.**

Davison Chemical Co., Baltimore, Md.

**—(Machinery.)**

McLanahan-Stone Machine Co., Hollidaysburg, Pa.

**PIG-IRON.**

Republic Steel Corp., Youngstown, Ohio.  
Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**PILE SHOES.**

Janney, Jr., Jos. A., Philadelphia, Pa.

**PILING (Creosoted.)**

Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville.  
Ayer & Lord Tie Co., Inc., Chicago.  
Carolina Wood Preserving Co., Charleston, S. C.  
Savannah Creosoting Co., Inc., Savannah.  
Wales Wood-Preserving Co., Norfolk, Va.

**—(Steel Sheet.)**

Carnegie Steel Co., Pittsburgh, Pa.  
Zelnicke Supply Co., W. A., St. Louis.

**PILLOW BLOCKS.**

Goldens' Fdry. & Mch. Co., Columbus, Ga.

**PIPE.**

Albert & Davidson Pipe Corp., Brooklyn, N. Y.  
Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.  
Arm-o-Cuvert Mfrs. Assn., Middletown, O.  
Birmingham Boiler & Engr. Co., Birmingham, Ala.  
Central Pipe & Supply Co., Charleston, W. Va.  
Greenpoint Iron & Pipe Co., Inc., Brooklyn, N. Y.  
Hudson Pipe & Supply Co., Bayonne, N. J.  
Maryland Pipe & Steel Corp., Baltimore, Md.  
National Tube Co., Pittsburgh, Pa.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Power Piping Co., Pittsburgh, Pa.

**—(Cast Iron.)**

Amer. Cast Iron Pipe Co., Birmingham.  
Cast Iron Pipe Research Assn., Chicago.  
Central Foundry Co., The, New York, N. Y.  
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.  
National Cast Iron Pipe Co., Birmingham.  
U. S. Pipe & Foundry Co., Burlington, N. J.

**—(Dredge.)**

Abendroth & Root Mfg. Co., New York.

**—(Hammer-Welded.)**

National Tube Co., Pittsburgh, Pa.

**—(Iron and Steel.)**

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

**—(Riveted.)**

Abendroth & Root Mfg. Co., New York.

**—(Second-Hand.)**

Albert & Davidson Pipe Corp., Brooklyn, N. Y.  
Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.  
Central Pipe & Sup. Co., Charleston, W. Va.  
Greenpoint Iron & Pipe Co., Inc., Brooklyn, N. Y.  
Hudson Pipe & Supply Co., Bayonne, N. J.  
Marine Metal & Supply Co., New York.  
Maryland Pipe & Steel Corp., Baltimore, Md.

**—(Spiral Riveted.)**

Abendroth & Root Mfg. Co., New York.  
Taylor Forge & Pipe Wks., Chicago, Ill.

**—(Steel.)**

Bethlehem Steel Co., Bethlehem, Pa.  
National Tube Co., Pittsburgh, Pa.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Power Piping Co., Pittsburgh, Pa.  
Republic Steel Corp., Youngstown, Ohio.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

**—(Welded.)**

Welded Products Co. of La., Inc., New Orleans, La.

**—(Wrought Iron.)**

Reading Iron Co., Reading, Pa.

**—Benders and Headers.**

Grinnell Co., Inc., Providence, R. I.

**—Bending Machines.**

American Pipe Bending Machine Co., Boston, Mass.

**—Coatings.**

Foster Co., Benjamin, Philadelphia, Pa.

**—Fittings.**

Amer. Cast Iron Pipe Co., Birmingham.  
Georgia Iron Works, Augusta, Ga.  
Grinnell Co., Inc., Providence, R. I.

**—Lines (Water, Gas & Oil—Riveted or Welded.)**

Biggs Boiler Works Co., Akron, Ohio.

**—Machinery (Concrete.)**

Quinn Wire & Iron Works, Boone, Iowa.

**—Unions and Joints.**

Dart Mfg. Co., E. M., Providence, R. I.

**—Systems (Industrial.)**

Grinnell Co., Inc., Providence, R. I.  
Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.  
Power Piping Co., Pittsburgh, Pa.

**PLATES (Steel.)**

Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Granite City Steel Co., Granite City, Ill.  
Gulf States Steel Co., Birmingham, Ala.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Tennessee Coal, Iron & Railroad Co., Birmingham.

**PNEUMATIC TOOLS.**

Chicago Pneumatic Tool Co., New York.  
Ingersoll-Rand Co., New York, N. Y.

**POLES (Creosoted.)**

Amer. Creosote Wks., Inc., New Orleans.  
Amer. Creosoting Co., Inc., Louisville, Ky.  
Ayer & Lord Tie Co., Inc., Chicago.  
Brown Wood Preserving Co., Louisville, Ky.  
Carolina Wood Preserving Co., Charleston, S. C.  
Savannah Creosoting Co., Savannah, Ga.  
Taylor-Colquitt Co., Spartanburg, S. C.

**—(Steel.)**

Bates Steel Corp., Walter, Gary, Ind.

**—(Tubular, Steel.)**

National Tube Co., Pittsburgh, Pa.

**—(Zinc Meta Arsenite Treated.)**

Curtin-Howe Corp., New York City.

**POLISHING MACHINERY.**

(Wheels, Blocks.)  
Carborundum Co., Niagara Falls, N. Y.

**PORTABLE HOUSES (Metal.)**

Braden Steel Corp., Tulsa, Okla.

**POST CAPS.**

Duplex Hanger Co., Cleveland, Ohio.

**POSTS, (Cast Iron, Railway and Highway.)**

U. S. Pipe & Foundry Co., Burlington, N. J.

**POWER TRANSMISSION MACHINERY.**

American Pulley Co., Philadelphia, Pa.  
Diamond Chain & Mfg. Co., Indianapolis.  
Goldens' Fdry. & Mch. Co., Columbus, Ga.  
O'Brien Machinery Co., Phila., Pa.  
Schiffel's Sons Co., J. S., Macon, Ga.  
Wood's Sons Co., T. B., Chambersburg, Pa.

**—(Pumps.)**

Luitwieler Pumping Engine Co., Rochester, N. Y.

**PREHEATERS (Air.)**

Combustion Engr. Corp., New York City.

**PRESSES, (Baling, Cottonseed Oil, Hydraulic and Power.)**

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
Ripley Foundry & Machine Co., Ripley, O.

**—(Metal Stamping.)**

Bliss Co., E. W., Brooklyn, N. Y.

**PRINTERS (Book, Catalog, Job.)**

Smith & Son Co., Oscar T., Baltimore, Md.  
Young & Selden Co., Baltimore, Md.

**PRODUCER (Gas Machines.)**

Gas-O-Flame Stove Wks., Port Deposit, Md.  
Morgan Construction Co., Worcester, Mass.  
Wood & Co., B. D., Phila., Pa.

**PULLEYS (Friction Clutch.)**

Caldwell Co., Inc., W. E., Louisville, Ky.  
Schultz & Son, A. L., Chicago, Ill.  
Wood's Sons Co., T. B., Chambersburg, Pa.

**—(Motor and Machine.)**

American Pulley Co., Philadelphia, Pa.

**—(Steel Split.)**

American Pulley Co., Philadelphia, Pa.

**—Shafting and Hangers.**

American Pulley Co., Philadelphia, Pa.  
Goldens' Fdry. & Mch. Co., Columbus, Ga.  
Wood's Sons Co., T. B., Chambersburg, Pa.

**PULVERIZED COAL EQUIPMENT.**

Combustion Engr. Corp., New York, N. Y.  
Fuller Lehigh Co., Fullerton, Pa.

**PULVERIZERS (See Crushing and Pulverizing Machinery.)****PUMPING MACHINERY.**

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.  
Chain Belt Co., Milwaukee, Wis.  
Cook, Inc., A. D., Lawrenceburg, Ind.  
Fairbanks, Morse & Co., Chicago, Ill.  
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.  
Luitwieler Pumping Engine Co., Rochester, N. Y.  
Myers & Bro. Co., The F. E., Ashland, O.  
National Equipment Corp. (C. H. & E. Division), Milwaukee, Wis.  
Platt Iron Works, Dayton, Ohio.  
Viking Pump Co., Cedar Falls, Iowa.  
Virginia Mch. & Well Co., Richmond, Va.

**PUMPS (Air.)**

Manistee Iron Works Co., Manistee, Mich.

**—(Air Lift.)**

Ingersoll-Rand Co., New York, N. Y.  
Sullivan Machinery Co., Chicago, Ill.

**—(Boiler Feed.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.  
Delaware Steam Turbine Co., Trenton, N. J.  
Erie Pump & Engine Wks., Medina, N. Y.  
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.  
Manistee Iron Works Co., Manistee, Mich.  
Myers & Bro. Co., The F. E., Ashland, O.

**—(Centrifugal.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.  
Delaware Steam Turbine Co., Trenton, N. J.  
Erie Pump & Engine Wks., Medina, N. Y.  
Fairbanks, Morse & Co., Chicago, Ill.  
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.  
Jaeger Machine Co., Columbus, Ohio.  
Layne & Bowler, Inc., Memphis, Tenn.  
Manistee Iron Works Co., Manistee, Mich.  
Morris Machine Wks., Baldwinville, N. Y.  
Novo Engine Co., Lansing, Mich.

**—(Contractors.)**

Erie Pump & Engine Wks., Medina, N. Y.  
Novo Engine Co., Lansing, Mich.

**—(Deep Well.)**

Cook, Inc., A. D., Lawrenceburg, Ind.  
Layne & Bowler, Inc., Memphis, Tenn.  
Luitwieler Pumping Engine Co., Rochester, N. Y.  
Novo Engine Co., Lansing, Mich.

**—(Diaphragm.)**

Novo Engine Co., Lansing, Mich.

**—(Hydraulic.)**

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

**—(Power.)**

Platt Iron Works, Dayton, Ohio.  
Sterling Engine Co., Buffalo, N. Y.

**—(Pulverized Coal.)**

Fuller Lehigh Co., Fullerton, Pa.

**—(Rotary.)**

Viking Pump Co., Cedar Falls, Iowa.

**—(Sand and Dredging.)**

Ellis-Mott Machine Corp., Baltimore, Md.  
Erie Pump & Engine Wks., Medina, N. Y.  
Georgia Iron Works, Augusta, Ga.

**—(Steam.)**

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.  
Emerson Pump & Valve Co., Alexandria, Va.  
Fairbanks, Morse & Co., Chicago, Ill.  
Ingersoll-Rand Co. (A. S. Cameron Steam Works), New York, N. Y.  
Platt Iron Works, Dayton, Ohio.

**—(Vacuum.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Chicago Pneumatic Tool Co., New York.  
Ingersoll-Rand Co., New York, N. Y.  
Sullivan Machinery Co., Chicago, Ill.

**—(Water Works.)**

Layne & Bowler, Inc., Memphis, Tenn.  
Manistee Iron Works Co., Manistee, Mich.

**PUNCHING AND SHEARING MACHINERY.**

Bliss Co., E. W., Brooklyn, N. Y.  
Whitney Metal Tool Co., Rockford, Ill.

**RACK RAKES.**

Newport, New Shipbuilding & Drydock Co., Newport News, Va.

**RADIATOR ENCLOSURES.**

Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

**RAILINGS (Iron Pipe.)**

Pipe Railing Constr. Co., Long Island City, N. Y.

**—and Grilles, Iron and Brass, (Banks and Offices.)**

Ludlow Saylor Wire Co., St. Louis, Mo.

**RAILROAD Equipment and Supplies (New.)**

Robinson & Orr, Pittsburgh, Pa.

**—Equipment and Supplies (Used.)**

Birmingham Rail & Loco. Co., Birmingham.  
Equip. Sales & Rentals Co., Pittsburgh.  
Levis & Co., Henry, Philadelphia, Pa.  
Smith & Co., W. M., Birmingham, Ala.  
Southern Iron and Equip. Co., Atlanta.  
Zelnicke Supply Co., W. A., St. Louis.

**—(Frogs and Switches.)**

Bethlehem Steel Co., Bethlehem, Pa.  
Koppel Ind. Car & Equip. Co., Koppel, Pa.  
Robinson & Orr, Pittsburgh, Pa.

**RAILROADS — (Offering Industrial, Agricultural and Commercial Opportunities.)**

Atlanta and West Point R. R., Atlanta.  
Central of Georgia Rwy., Savannah, Ga.  
Missouri-Kansas-Texas Lines, Dallas, Tex.  
Missouri Pacific Lines, St. Louis, Mo.  
Model Land Company, Flagler System, St. Augustine, Fla.  
Norfolk & Western Railway, Roanoke, Va.  
Tennessee Central Railway, Nashville.

**RAILS (New and Used.)**

Birmingham Rail & Loco. Co., Birmingham.  
Carnegie Steel Co., Pittsburgh, Pa.  
Levis & Co., Henry, Philadelphia, Pa.  
Perry, Buxton, Doane Co., Philadelphia.  
Robinson & Orr, Pittsburgh, Pa.  
Smith & Co., W. M., Birmingham, Ala.  
Southern Iron & Equip. Co., Atlanta, Ga.  
Sweet's Steel Co., Williamport, Pa.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Weller & Co., Birmingham, Ala.  
Zelnicke Supply Co., W. A., St. Louis.

**RAILWAYS (Industrial.)**

Easton Car & Construction Co., Easton, Pa.  
Koppel Ind. Car & Equip. Co., Koppel, Pa.

**—(Marine.)**

Charleston Dry Dock and Machine Co., Charleston, S. C.

**RECEPTACLES (Self-Closing — Waste Paper.)**

Whitaker Paper Co., Baltimore, Md.

**REELS AND SPOOLS. (Pressed Metal.)**

American Pulley Co., Philadelphia, Pa.

**REFRACATORIES.**

Harrison-Walker Refractories Co., Pittsburgh, Pa.  
North American Refractories Co., Cleveland, Ohio.  
Taylor Sons Co., Charles, Cincinnati.

**REFRIGERATING Machinery (See Ice and Refrigerating Machinery and Supplies.)****REINFORCING for Concrete.**

American Steel and Wire Co., Baito, Md.  
Carnegie Steel Co., Pittsburgh, Pa.  
Connors Steel Co., Birmingham, Ala.  
Dietrich Brothers, Baltimore, Md.  
Gulf States Steel Co., Birmingham, Ala.  
Knoxville Iron Co., Knoxville, Tenn.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Southern Engineering Co., Charlotte, N. C.  
Truscon Steel Co., Youngstown, Ohio.

**RESURFACING MATERIALS (Floor, Roof and Roadways.)**

Stonhard Co., Phila., Pa.

**RETORTS (Special Process — Riveted or Welded.)**

Biggs Boiler Works, ... Ohio.

**RIVER & HARBOR IMPROVEMENTS, (Dredging, Docks, Wharves, etc.)**

Arundel Corp., The, Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.  
Kansas City Bridge Co., Kansas City.

**RIVETS.**

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**ROAD and Street Machinery.**

Aene Road Mchry. Co., Frankfort, N. Y.  
Austin-Western Road Mchry. Co., Chicago.  
Blaw-Knox Co., Pittsburgh, Pa.  
Buffalo-Springfield Roller Co., Springfield, O.  
Caterpillar Tractor Co., San Leandro, Cal.  
Erie Machine Shops, Erie, Pa.  
Huber Mfg. Co., The, Marion, Ohio.  
Universal Crane Co., Lorain, Ohio.



**—and Street Material.**

Boxley & Co., W. W., Roanoke, Va.  
 Sloss-Sheffield Steel and Iron Co., Birmingham, Ala.  
 Truscon Steel Co., Youngstown, Ohio.  
 Woodstock Slag Corp., Birmingham, Ala.

**—Graders and Scrapers.**

Caterpillar Tractor Co., San Leandro, Cal.

**—Oils and Preservatives.**

Gulf Refining Co., Pittsburgh, Pa.

**—Reinforcement (Welded Fabric.)**

American Steel & Wire Co., Balto., Md.

**—Rollers (Steam and Gasoline.)**

Buffalo Springfield Roller Co., Springfield, O.

Erie Machine Shops, Erie, Pa.

Huber Mfg. Co., The, Marion, Ohio.

**—Rollers (For Concrete Work)**

Macon Concrete Roller Co., Macon, Ga.

**—Scarifiers.**

Buffalo Springfield Roller Co., Springfield, O.

**ROOFING (Ready Prepared, Felt, Tar, Asbestos, Asphalt.)**

Ambler Asbestos Shingle & Sheathing Co., Ambler, Pa.

Eternit, Inc., St. Louis, Mo.

**—and Siding (Composition.)**

Eternit, Inc., St. Louis, Mo.

**—and Siding (Metal.)**

American Rolling Mill Co., Middletown, O.

American Sheet and Tin Plate Co., Pittsburgh, Pa.

Edwards Mfg. Co., Cincinnati, O.

Gulf State Steel Co., Birmingham, Ala.

Milcor Steel Co., Milwaukee, Wis.

Moeschl-Edwards Corp., Cincinnati, O.

Republic Steel Corp., Youngstown, Ohio.

Robertson Co., H. H., Pittsburgh.

Ryerson & Son, Jos. T., St. Louis and New York.

Truscon Steel Co., Youngstown, Ohio.

Youngstown Sheet and Tube Co., Youngstown, O.

**—Tile, Cement (Interlocking Flat, Channel Glass.)**

Amer. Cement Tile Mfg. Co., Pittsburgh.

**—Tile's.**

Amer. Cement Tile Mfg. Co., Pittsburgh.

**ROPE (Manila, Sisal, Hemp, etc.)**

Broderick & Isaacson Rope Co., St. Louis.

**—Drives.**

Wood's Sons Co., T. B., Chambersburg, Pa.

**RULES (Steel.)**

Lufkin Rule Co., Saginaw, Mich.

**SAND.**

Arundel Corp., Baltimore, Md.

Friend & Co., Inc., Petersburg, Va.

**SANITARY Drinking Fountains.**

Rundle-Spence Mfg. Co., Milwaukee, Wis.

**SASH (Industrial.)**

Truscon Steel Co., Youngstown, Ohio.

**SAWMILL Machinery.**

Schofield's Sons Co., J. S., Macon, Ga.

**SAW RIGS.**

National Equipment Corp., (C. H. & E. Division), Milwaukee, Wis.

**SAWS (Cold Metal.)**

Earle Gear and Machine Co., Phila., Pa.

**SCAFFOLDING (Wooden)**

Patent Scaffolding Co., Chicago, Ill.

**SCHOOLS (Correspondence.)**

International Correspondence Schools, Scranton, Pa.

**SCOOPS (Hand.)**

American Mfg. Co., Chattanooga, Tenn.

**—(Wheeled.)**

Riddell Co., W. H., Bucyrus, Ohio.

**SCRAPERS (Drag and Wheel.)**

Saunders Bros., Chicago, Ill.

**SCRAP IRON AND STEEL.**

Hunts Sons, M. J., Philadelphia, Pa.

Perry, Huxton, Doane Co., Philadelphia.

Smith & Co., W. M., Birmingham, Ala.

**SCREEN CLOTH.**

Seneca Wire & Mfg. Co., Fostoria, Ohio.

**SCREENING (For Concrete and Road Construction.)**

American Limestone Co., Knoxville, Tenn.

**SCREENS (Sand, Gravel, Stone, Coal, Ore, etc.)**

Chicago Perforating Co., Chicago, Ill.

Erdle Perforating Co., Rochester, N. Y.

Hendrick Mfg. Co., Carbondale, Pa.

Ludlow Saylor Wire Co., St. Louis, Mo.

McLanahan-Stone Machine Co., Hollidaysburg, Pa.

Mundt & Sons, Charles, Jersey City, N. J.

Universal Crusher Co., Cedar Rapids, Ia.

**—(Sifting.)**

Newark Wire Cloth Co., Newark, N. J.

**SCREW-Machine Products.**

Progressive Mfg. Co., Torrington, Conn.

**SCREWS (Machine.)**

Progressive Mfg. Co., Torrington, Conn.

**SEAWALLS.**

Shore-Line Builders, Inc., Jacksonville, Fla.

**SEPARATORS (Dust.)**

Raymond Bros., Impact Pulv. Co., Chicago.

**SEWAGE Disposal Apparatus.**

Pacific Flush-Tank Co., New York, N. Y.

**SEWER Joint Compounds.**

Pacific Flush-Tank Co., New York, N. Y.

**—Pipe (Vitrified.)**

Bannon Pipe Co., Louisville, Ky.

Dee Co., Wm. E., Oak Hill, Ohio.

Lee Clay Products Co., Clearfield, Ky.

Owensboro Sewer Pipe Co., Owensboro, Ky.

**SEWER PIPE MACHINERY.**

Quinn Wire & Iron Works, Boone, Iowa.

**SHAFTING.**

Ryerson & Sons, Inc., Jos. T., St. Louis and New York.

**—(Cold Rolled.)**

Bliss & Laughlin, Inc., Harvey, Ill.

**—(Flexible.)**

Strand & Co., N. A., Chicago, Ill.

**—Material (Tubular.)**

National Tube Co., Pittsburgh, Pa.

**SHARPENING Stones.**

Carborundum Co., Niagara Falls, N. Y.

**SHEET Metal Work.**

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Republic Steel Corp., Youngstown, Ohio.

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

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Youngstown Sheet & Tube Co., Youngstown, O.

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Thew Shovel Co., The, Lorain, Ohio.

Universal Power Shovel Co., Milwaukee, Wis.

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**—(Steel and Wood Bifolding.)**

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Brown & Co., Chattanooga, Tenn.

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Central Power & Light Co., San Antonio.

Fort Worth Chamber of Commerce, Fort Worth, Texas.

Galveston, City of, Galveston, Texas.

Georgia Power Co., Atlanta, Ga.

Jacksonville, City of, Jacksonville, Fla.

Missouri-Kansas-Texas Lines, Dallas, Tex.

Missouri Pacific Line, St. Louis, Mo.

Model Land Company, (Flagler System), St. Augustine, Fla.

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Tennessee Central Railway, Nashville.

Texas Power & Light Co., Dallas, Texas.

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Amer. Cement Tile Mfg. Co., Pittsburgh.

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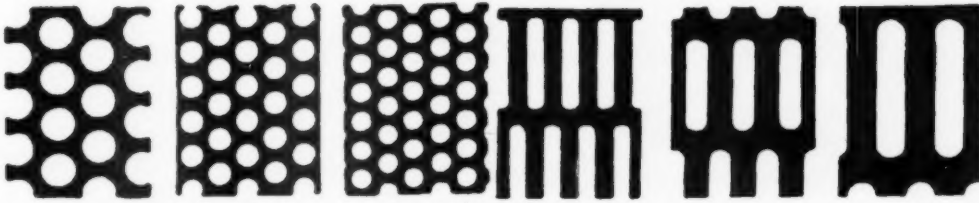
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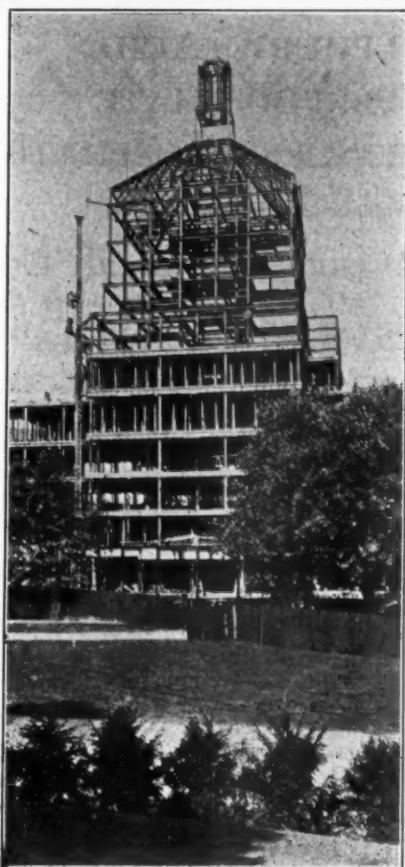
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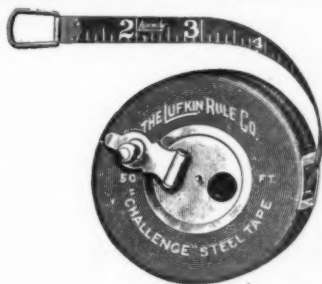
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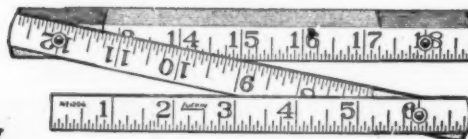
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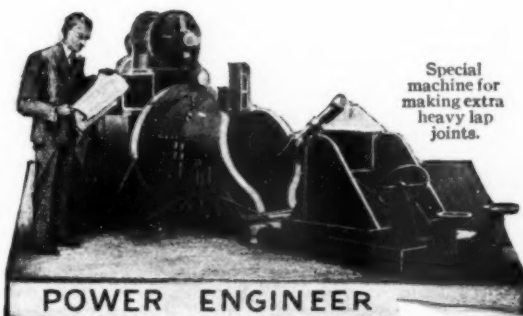
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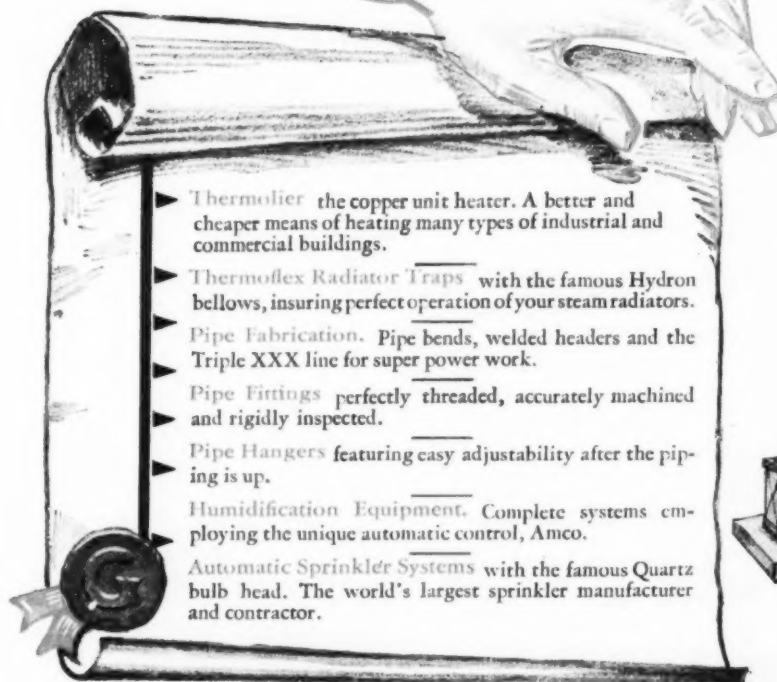
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